



Arlington Conservation Commission

Date: Thursday, January 6, 2022

Time: 7:30 PM

Location: Conducted by Remote Participation

Pursuant to State Legislation suspending certain provisions of the Open Meeting Law, G. L. c. 30A, § 20 relating to the COVID-19 emergency, the January 6, 2022, public meeting of the Arlington Conservation Commission shall be physically closed to the public to avoid group congregation. The meeting shall instead be held virtually using Zoom. Please register in advance for this meeting. Reference materials, instructions, and access information for this specific meeting will be available 48 hours prior to the meeting on the Commission's agenda and minutes page.

Agenda

1. Administrative

a. 7:30 p.m.

1. Wetland Delineations

Two sites have been identified as potential wetlands, one at Dallin School and the other on Turkey Hill.

2. Wellington Park Emergency Certification Approval

Removal of a damaged bridge at Wellington Park necessitated an Emergency Certification on November 19, 2021.

3. Enforcement Actions Related to 19R Park Avenue

Conditions of an abutting property are impacting conditions at 19R Park Avenue. Town officers are working on a solution.

4. Public Outreach

Updates are needed to the Conservation Commission website. Other public relations opportunities, including highlighting citizen conservation efforts, have been proposed by residents.

5. Changes to Certified Mail Requirements

Applicants report inconsistencies with USPS certified mailings and have suggested alternatives for the period of the Covid-19 State of Emergency.

6. Fee Schedule for Partial Certificates of Compliance

Arlington's regulations are unclear on when payment of fees is due for partial Certificates of Compliance and may need revision.

2. Hearings

Hearing Documents

8:00 p.m. **1. Request for Certificate of Compliance: 54 Dothan Street
DEP #91-196**

Pursuant to a partial Certificate of Compliance (CoC) issued in 2019, the Applicant seeks a full CoC. The original Order of Conditions has been satisfied, including the three-year monitoring report required for a full CoC. The Conservation Agent recommends approval of this request.

The project is in the buffer zone of a Bordering Vegetated Wetland that is located entirely within the boundaries of the Town of Arlington's McClennan Park.

**2. Notice of Intent: 1021 – 1025 Massachusetts Avenue
DEP #XX-XXX**

Applicant proposes to demolish two (2) structures and associated driveways, parking lots, and site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building (under Chapter 40B) with ground-level parking garage and retail space. Portions of the proposed project are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management and native revegetation, establishment of a meadow, and stormwater management are proposed.

3. Updates

a. 9:00 p.m. Water Bodies Working Group Update

Please note: Not all items listed may in fact be discussed and other items not listed may be brought up for discussion to the extent permitted by law. This agenda includes those matters which can be reasonably anticipated to be discussed at the meeting.



Town of Arlington, Massachusetts

Hearing Documents

Summary:

8:00 p.m.

1. Request for Certificate of Compliance: 54 Dothan Street DEP #91-196

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ATTACHMENTS:

Type	File Name	Description
▢ Reference Material	54_Dothan_Street_End_of_Season_Monitoring_Report.pdf	54 Dothan Street End of Season Monitoring Report
▢ Reference Material	54_Dothan_Street_Partial_Certificate_of_Compliance.pdf	54 Dothan Street Certificate of Compliance
▢ Reference Material	54_Dothan_Street_WPA_Form_8A.pdf	54 Dolan Street WPA Form 8A
▢ Reference Material	1021_-_1025_Massachusetts_Avenue_Notice_of_Intent.pdf	1021-1025 Massachusetts Avenue Notice of Intent

Environmental Monitoring: 54 Dothan Street, Arlington, MA

Project Name: **DEP File Number: 91- 196**
Project Address: 54 Dothan Street, Arlington, MA
Report Prepared By: Mary Trudeau, CPESC
Date of Report/Site Visit: Site inspection November 17, 2021

As required in the Partial Certificate of Compliance, issued for this project in May of 2019, I inspected the condition of the buffer zone vegetation at 54 Dothan Street, in Arlington. The woody vegetation was planted in 2019, and the planting plan approved by the Commission was prepared by Riley Landscaping, and dated May 9, 2019. The planting plan required the following trees and shrubs to be planted within the jurisdictional buffer zone:

- (2) Red Maple (*Acer rubrum*)
- (2) River Birch (*Betula nigra*)
- (1) White Pine (*Pinus strobus*)
- (2) Swamp White Oaks (*Quercus bicolor*)

- (2) Shadblow Serviceberry (*Amelanchier canadensis*)
- (2) Alternative leaf Dogwood (*Cornus alternifolia*)

In general, the restoration area appears to have thrived. Each of the (7) trees within the planting area appear viable. The following photos show the condition of several of these woody plants:





As can be seen in the photos, the herbaceous layer is thick, and dominated by a variety of herbs and grasses.



As noted above, the landscape architect for the property included (4) shrubs in the planting plan. I located these shrubs within the restoration area, but not all of the plants were in good condition. Several of the shrubs had been “gnawed”, and one (possibly two) of the shrubs appeared completely dead. Examples of the damage noted on the lower stems is shown below:



I also noted several indigenous saplings (Black Cherry-*Prunus serotina*; Red Maple and Gray Birch-*Betula populifolia*) growing within the restoration area. Some of these Birch and Maple saplings are shown below:



Summary:

Based on my inspection on November 17, I believe that the applicant has made a good effort to protect, and care for, the required planting materials. Each of the trees appears healthy, and in good condition. In particular, the Swamp White Oaks; Red Maples; and River Birch are thriving. The sole White Pine is viable, but appears to be overly shaded by the mature canopy materials.

The shrubs have been less successful, with at least one (possibly two) dead shrubs, and a third with a fair amount of deadwood. The surviving Amelanchier is in good condition. I believe that the gnawing observed on the shrubs is outside of the control of the applicant, and represents a naturally occurring process. The restoration area, with a 75% survival requirement, should have 8.25 live plants. With the seven vigorous trees, and the healthy Amelanchiers, the site is very close to meeting this ratio. If the indigenous woody plants, that have been allowed to thrive within the restoration area and the potential for regrowth on the gnawed shrubs, are considered, as well as the well established herb and grass community, I believe the planting threshold has been met.

The current homeowner is considering a sale of the property and would like the full Certificate of Compliance issued for this work. **If** the Commission requires replacement of the failing shrubs, I suggest that the current species be diversified, and the replacement plantings should consist of:

(2) Spice Bush (*Lindera bensoin*)

These shrubs are native to New England, and are not usually chosen by rabbits and deer to gnaw, due to the scent of the woody material.

Mary Trudeau, Wetlands Consultant
November 29, 2021



TOWN OF ARLINGTON

730 Massachusetts Ave.
Arlington, MA 02476
781-316-3012

ARLINGTON CONSERVATION COMMISSION

HAND DELIVERY ON May 17, 2019

May 17, 2019

Michael Wilson
54 Dothan Street
Arlington, MA 02474

RE: Partial Certificate of Compliance for MassDEP File #091-196

Dear Mr. Wilson:

Attached please find the Partial Certificate of Compliance for the MassDEP File #091-196 Order of Conditions dated August 22, 2008. All conditions have been completed except for the three year monitoring period for all plantings as referenced in the Re-Vegetation Memorandum, written by LEC Environmental and dated August 7, 2008. The planting plan had minor modifications, as described in the Buffer Zone Re-Vegetation Plan, written by Riley Landscaping Inc. and dated May 9, 2019. Both of these documents are included in this Certificate of Compliance packet.

The Property Owner shall call the Arlington Conservation Agent (781-316-3012) to conduct a vegetation inspection each November during the three year monitoring period. These inspections will ensure the survival of the plantings installed per the Riley Landscaping planting plan.

Thank you,

Emily Sullivan, Conservation Agent
Arlington Conservation Commission
esullivan@town.arlington.ma.us
781-316-3012

Received: _____ Date: _____

For Registry of Deeds Use Only



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

091-196

Provided by DEP

A. Project Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. This Certificate of Compliance is issued to:

Michael Terry Wilson and Daniela Cipolletta

Name

54 Dothan Street

Mailing Address

Arlington

City/Town

MA

State

02474

Zip Code

2. This Certificate of Compliance is issued for work regulated by a final Order of Conditions or Order of Resource Area Delineation issued to:

Sandy Caffelle

Name

8/22/2008

Dated

091-196

DEP File Number

3. The project site is located at:

54 Dothan Street

Street Address

113

Assessors Map/Plat Number

Arlington

City/Town

Block 3, Lot 7

Parcel/Lot Number

The final Order of Conditions or Order of Resource Area Delineation was recorded at the Registry of Deeds for:

Sandy Caffelle

Property Owner (if different)

Middlesex South

County

51644

Book

233

Page

2008 00145418

Certificate

4. A site inspection was made in the presence of the applicant, or the applicant's agent, on:

5/16/2019

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

091-196

Provided by DEP

B. Certification

Check all that apply:

☐ **Complete Certification:** It is hereby certified that the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☒ **Partial Certification:** It is hereby certified that only the following portions of work regulated by the above-referenced Order of Conditions have been satisfactorily completed. The project areas or work subject to this partial certification that have been completed and are released from this Order are:

All conditions have been completed except for the three year monitoring period as referenced in the re-vegetation memorandum dated August 7, 2008. The property owner shall call the Agent to inspect each November for the three years.

☐ **Invalid Order of Conditions:** It is hereby certified that the work regulated by the above-referenced Order of Conditions never commenced. The Order of Conditions has lapsed and is therefore no longer valid. No future work subject to regulation under the Wetlands Protection Act may commence without filing a new Notice of Intent and receiving a new Order of Conditions.

☐ **Ongoing Conditions:** The following conditions of the Order shall continue: (Include any conditions contained in the Final Order, such as maintenance or monitoring, that should continue for a longer period).

Condition Numbers:

☐ **Order of Resource Area Delineation:** It is hereby certified that the wetland resource area delineation for the above-referenced Order of Conditions has been satisfactorily completed

C. Authorization

Issued by:

Arlington

Conservation Commission

5/17/2019

Date of Issuance

This Certificate must be signed by a majority of the Conservation Commission and a copy sent to the applicant and appropriate DEP Regional Office (See <http://www.mass.gov/eea/agencies/massdep/about/contacts/>).

Signatures:



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number:

WPA Form 8B – Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

091-196

Provided by DEP

D. Recording Confirmation

The applicant is responsible for ensuring that this Certificate of Compliance is recorded in the Registry of Deeds or the Land Court for the district in which the land is located.

Detach on dotted line and submit to the Conservation Commission.

To:

Arlington

Conservation Commission

Please be advised that the Certificate of Compliance for the project at:

54 Dothan Street

Project Location

091-196

DEP File Number

Has been recorded at the Registry of Deeds of:

Middlesex South

County

for:

Michael Terry Wilson and Daniela Cipolletta

Property Owner

and has been noted in the chain of title of the affected property on:

Date

Book

Page

If recorded land, the instrument number which identifies this transaction is:

If registered land, the document number which identifies this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act. Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
d. ☐ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
g. ☐ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect these interests, and a final Order of Conditions is issued. A description of the performance standards which the proposed work cannot meet is attached to this Order.
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

3. <input checked="" type="checkbox"/> Buffer Zone Impacts: Shortest distance between limit of project disturbance and wetland boundary (if available)				82.5
				a. linear feet
Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		

Dorham St (r 107 theoda)
newhouse
8/22/08
MassDEP File Number:



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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B. Findings (cont.)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input type="checkbox"/> Riverfront area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		

Dorham St (r 107 Thesda)
 new house
 8/22/08
 MassDEP File Number:



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

91-196

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C. General Conditions Under Massachusetts Wetlands Protection Act

(only applicable to approved projects)

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. the work is a maintenance dredging project as provided for in the Act; or
 - b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.
6. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.
7. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
8. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to this Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
9. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number 91-196"

Dothan St (r. 107 Thanda)
Newhouse
 8/22/08

MassDEP File Number:

91-196



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. General Conditions Under Massachusetts Wetlands Protection Act

10. Where the Department of Environmental Protection is requested to Issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
11. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
12. The work shall conform to the plans and special conditions referenced in this order.
13. Any change to the plans identified in Condition #12 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
14. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
15. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
16. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
17. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
18. The work associated with this Order is (1) ☒ Is not (2) ☐ subject to the Massachusetts Stormwater Policy Standards. If the work is subject to the Stormwater Policy, the following conditions apply to this work and are incorporated into this Order:
 - a) No work, including site preparation, land disturbance, construction and redevelopment, shall commence unless and until the construction period pollution prevention and erosion and sedimentation control plan required by Stormwater Standard 8 is approved in writing by the issuing authority. Until the site is fully stabilized, construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan, and if applicable, the Stormwater Pollution Plan required by the National Discharge Elimination System Construction General Permit.

Dothan St. (r. 107-thesda)
new house

8/22/08

MassDEP File Number:

91-196



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs until written approval is received from the issuing authority. To request written approval, the following must be submitted: illicit discharge compliance statement required by Stormwater Standard 10 and as-built plans signed and stamped by a registered professional engineer certifying the site is fully stabilized; all construction period stormwater BMPs and any illicit discharges to the stormwater management system have been removed; and all post-construction stormwater BMPs were installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure they are not damaged and will function properly.
- c) Prior to requesting a Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall submit to the issuing authority an Operation and Maintenance (O & M) Compliance Statement for the Stormwater BMPs. This Statement shall identify the responsible party for implementing the Operation and Maintenance Plan and also state that: 1. "Future responsible parties shall be notified in writing of their continuing legal responsibility to operate and maintain the stormwater management BMPs and implement the Pollution Prevention Plan; and 2. The Operation and Maintenance Plan for the stormwater BMPs is complete and will be implemented upon receipt of the Certificate."
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the issuing authority shall presume that the responsible party for maintaining each BMP is the landowner of the property on which the BMP is located. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement acceptable to the issuing authority evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the Operation and Maintenance Plan section of the approved Stormwater Report, and the Massachusetts Stormwater Handbook.
- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three years including inspections, repairs, replacement and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make this log available to MassDEP and the Conservation Commission upon request; and
 3. Allow members and agents of the MassDEP and the Conservation Commission to enter and inspect the premises to evaluate and ensure that the responsible party complies with the Operation and Maintenance requirements for each BMP set forth in the Operations and Maintenance Plan approved by the issuing authority.
- h) All sediments or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

j) The stormwater management system approved in the Final Order of Conditions shall not be changed without the prior written approval of the issuing authority. Areas designated as qualifying pervious areas for purpose of the Low Impact Site Design Credit shall not be altered without the prior written approval of the issuing authority.

k) Access for maintenance of stormwater BMPs shall not be obstructed or blocked. Any fencing constructed around stormwater BMPs shall include access gates. Fence(s) shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See attached four (4) pages, conditions #18-34.

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Arlington hereby finds (check one that applies):
Conservation Commission

a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Arlington Wetlands Bylaw

Title V, Section 8

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See attached four (4) pages, conditions #18-34.

Dorham St (r. 107thda)

New house

8/22/08

MassDEP File Number:

91-196

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 - Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

E. Issuance

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form:

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Handwritten signatures of three individuals]

8/22/08

1. Date of Issuance

five

2. Number of Signers

Notary Acknowledgement

Commonwealth of Massachusetts County of

Middlesex

On this

21st

of

August

2008

Before me, the undersigned Notary Public,
personally appeared

David E. White

Name of Document Signer

proved to me through satisfactory evidence of identification, which was/were

personal acquaintance

Description of evidence of identification

to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

As member of

Arlington

City/Town

Conservation Commission

Corinna K. Beckwith

Signature of Notary Public

Corinna K. Beckwith

Printed Name of Notary Public

August 22, 2014

My Commission Expires (Date)

Place notary seal and/or any stamp above

This Order is issued to the applicant as follows:

☐ by hand delivery on

Date

☐ by certified mail, return receipt requested, on

8/22/08

Date

Dothan St (S. 107 Thesda)
new house

8/22/08

MassDEP File Number:

91-196



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant. Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order or Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Section G, Recording Information is available on the following page.

Dorhan St (r. 107 Thesda)
 new house
 8/22/08
 MassDEP File Number:

91-196



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c: 131, §40

G. Recording Information

This Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Arlington, 730 Massachusetts Ave., Arlington, MA 02476
 Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Arlington
 Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Dorhan St (rear of 107 Thesda)
 Project Location

91-196
 MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Dothan St (r. 107 Thesda)
new house
8/22/08

ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS -DOTHAN ST
NEW HOUSE (rear of 107 THESDA)

DEP FILE NO. 91-196

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Referenced Documents and Plans

1. Notice of Intent for Dothan St (rear of 107 Thesda Street), prepared by Rich Kirby, LEC Environmental Consultants, Inc., 107 Audubon Rd, Building 2, Suite 110, Wakefield, MA 01880, prepared for Sandra Caffelle, 107 Thesda St, Arlington, MA 02474, dated 7/16/08.
2. Revegetation Plan for Dothan St (rear of 107 Thesda St), prepared by Rich Kirby, LEC Environmental Consultants, Inc., 107 Audubon Rd, Building 2, Suite 110, Wakefield, MA 01880, prepared for Sandra Caffelle, 107 Thesda St, Arlington, MA 02474, dated 8/7/08.

Findings

After a site visit and duly noticed public hearing, the Commission makes the following findings:

1. The proposed house will be located in the outer Buffer Zone at 82.5 feet away from a Bordering Vegetated Wetland that is located entirely within the boundaries of the Town of Arlington's McClennan Park.
2. The above-referenced revegetation plan will satisfy the local bylaw requirement for the trees that are removed from the Buffer Zone for this work.

Special and/or Bylaw Conditions

18. At least 48 hours, prior to the start of any work, the applicant shall submit to the Commission (letter, email or message to 781-316-3012) the names and 24 hour (emergency) phone numbers of project managers and environmental monitor or other persons responsible for demolition, site work or mitigation.

19. Before work begins, erosion and sediment controls shall be installed at the limits of the work area in such a manner as to protect the wetland.

20. The contractor shall call/contact the Conservation Administrator (781-316-3012, cbeckwith@town.arlington.ma.us) to arrange for a site walk to confirm the installation and placement of erosion controls prior to the start of any grading, clearing, or grubbing work.

21. Any stormwater disposal units (drywells/trenchdrain etc) that are proposed within the Buffer Zone, will require additional review by the Conservation Commission.

22. The large (18 inch) Silver Maple in the southwest corner of the lot, should be considered for preservation and protection during construction by installing high visibility snow fence at the drip line, or other similar protections. This condition is not mandatory as the replanting plan provides for its removal.

23. The applicant shall make sure that a copy of this Order of Conditions, with the above-referenced plans, is available on site at all times, and that contractors, site managers, foremen, and sub-contractors understand its provisions.

Dathan St (r. 107 Thesda)
New house
8/22/08
58ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS -DOTHAN ST
NEW HOUSE (rear of 107 THESDA)

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24. During construction, the person responsible for on-site compliance (environmental monitor) shall submit a monthly status report to the Commission. This report shall include, but not be limited to: the status of construction, changes in the construction schedule, any erosion or pollutant problems and how those problems were resolved. The applicant shall be responsible for ensuring that this report is submitted as required. This report may be submitted via email to cbeckwith@town.arlington.ma.us.

25. The Conservation Commission, its employees and its agents (with notification of site personnel) shall have the right of entry onto the site to inspect for compliance with the terms of this Order of Conditions.

26. No construction vehicles shall be stored over night within 100 feet of the waterway. No vehicles shall be maintained (oil changed, refueled) within 100 feet of the waterway.

27. No stockpiling of soil or demolition materials shall be permitted within 100 feet of the waterway. All other stockpiles must be covered at the end of each work day.

28. Any dirt or debris spilled or tracked onto any paved streets or areas shall be swept up and removed daily.

29. All dumpsters must be covered at end of each work day and no dumpsters will be allowed within 100 feet of the Resource Area.

30. In the event of discovery of hazardous materials on the site during excavation work, clean up of these materials shall conform to the requirements and standards of State law and regulations.

31. Any dewatering operations shall conform to the following:

(a) Notify the Conservation Commission that dewatering is required.

(b) Any catch basins, drain and outfalls to be used in dewatering operations shall be cleaned out before operations begin.

(c) Any water discharged as part of any dewatering operation shall be passed through filters, on-site settling basins, settling tank trucks, or other devices to ensure that no observable sediments or pollutants are carried into any Resource Area, street, drain or adjacent property.

(d) Measures shall be taken to ensure that no erosion or scouring shall occur on public or private property, or on the banks or bottoms of water bodies, as a result of dewatering operations.

32. Arrangements shall be made as per Condition 31(c) and (d) for any rinsing of tools, equipment, etc. associated with on-site mixing or use of concrete or other materials. Any spillage of materials shall be cleaned up promptly.

33. Any plantings and landscaping within the 100-foot Buffer Zone shall conform to the following:

(a) No plant materials shall be used of any species which appears on the attached list of invasive species.

(b) Fertilizers, pesticides, or herbicides shall not be used within the Buffer Zone, except as noted in (c) unless a specific need for treating a particular specimen or species has been demonstrated to the Commission, and permission has been granted.

INVASIVE PLANT SPECIES OCCURRING IN MASSACHUSETTS

The following is a list of non-native plants recorded in Massachusetts which possess strongly invasive characteristics. Those which are currently presenting the greatest threat to native plant communities are in bold. Remember, however that some species which are not bolded may eventually become major problems.

=DO NOT USE ANY OF THESE PLANTS=

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Amur honeysuckle	<i>Lonicera maackii</i>	Lesser naiad	<i>Najas minor</i>
Autumn olive	<i>Elaeagnus umbellata</i>	Live-forever or Orpine	<i>Sedum telephium</i>
Barnyard grass	<i>Echinochloa crusgalli</i>	Mile-a-Minute Vine	<i>Polygonum perfoliatum</i> L.
Black locust	<i>Robinia pseudoacacia</i>	Moneywort	<i>Lysimachia nummularia</i>
Black swallow-wort	<i>Cynanchum loulseae</i>	Morrow's honeysuckle	<i>Lonicera marrowii</i>
Bittersweet nightshade	<i>Solanum dulcamara</i>	Morrow's X Tatarian honeysuckle (hybrid)	<i>Lonicera x bella</i>
Bushy Rock-cress	<i>Cardamine impatiens</i>	Multiflora rose	<i>Rosa multiflora</i>
Canada bluegrass	<i>Poa compressa</i>	Norway maple	<i>Acer platanoides</i>
Chervil	<i>Anthriscus sylvestris</i>	Oriental bittersweet	<i>Celastrus orbiculata</i>
Coltsfoot	<i>Tussilago farfara</i>	Phragmites, Reed grass	<i>Phragmites australis</i>
Common barberry	<i>Berberis vulgaris</i>	Porcelain berry	<i>Ampelopsis brevipedunculata</i>
Common buckthorn	<i>Rhamnus cathartica</i>	Purple loosestrife	<i>Lythrum salicaria</i>
Common / hedge privet	<i>Ligustrum vulgare</i>	Reed canary-grass	<i>Phalaris arundinacea</i>
Common mullein	<i>Verbascum thapsus</i>	Russian olive	<i>Elaeagnus angustifolia</i>
Creeping buttercup	<i>Ranunculus repens</i>	Sea- or homed poppy	<i>Glaucium flavum</i>
Curly pondweed	<i>Potamogeton crispus</i>	Sheep fescue	<i>Festuca ovina</i>
Cypress spurge	<i>Euphorbia cyparissias</i>	Sheep-sorrel	<i>Rumex acetosella</i>
Dame's rocket	<i>Hesperis matronalis</i>	Silver lace-vine	<i>Polygonum aubertii</i>
English ivy	<i>Hedera helix</i>	Silver poplar	<i>Populus alba</i>
European water-milfoil	<i>Myriophyllum spicatum</i>		
Fanwort	<i>Cabomba caroliniana</i>	Spotted knapweed	<i>Centaurea biebersteinii</i>
Garlic mustard	<i>Alliaria petiolata</i>	Sweet reedgrass	<i>Glyceria maxima</i>
Giant waterweed	<i>Egeria densa</i>	Sycamore maple	<i>Acer pseudoplatanus</i>
Glossy buckthorn	<i>Rhamnus frangula</i>	Tatarian honeysuckle	<i>Lonicera tatarica</i>
Goutweed or Bishop's weed	<i>Aegopodium podagraria</i>	Tree-of-heaven	<i>Ailanthus altissima</i>
Hair fescue	<i>Festuca filiformis</i>	True forget-me-not	<i>Myosotis scorpioides</i>
Hairy willow-herb	<i>Epilobium hirsutum</i>	Water-chestnut	<i>Trapa natans</i>
Japanese barberry	<i>Berberis thunbergii</i>	Watercress	<i>Rorippa nasturtium-aquaticum</i>
Japanese honeysuckle	<i>Lonicera japonica</i>		
Japanese hops	<i>Humulus japonicus</i>	Western catalpa	<i>Catalpa speciosa</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>	White mulberry	<i>Morus alba</i>
Japanese privet	<i>Ligustrum obtusifolium</i>	Wild thyme	<i>Thymus pulegioides</i>
Japanese rose	<i>Rosa rugosa</i>	Winged euonymus, aka Burning bush	<i>Euonymus alata</i>
Japanese Stilt Grass	<i>Microstegium vimineum</i> (Trin.) A. Camus	Variable water-milfoil	<i>Myriophyllum heterophyllum</i>
Kiwi vine	<i>Actinidia arguta</i>	Yellow floating heart	<i>Nymphoides peltata</i>
Kudzu	<i>Peuraria Montana</i>	Yellow iris	<i>Iris pseudacorus</i>

From "A Guide to Invasive Plants in Massachusetts" by Pamela B. Weatherbee, Paul Somers and Tim Simmons. The Massachusetts Biodiversity Initiative, Massachusetts Division of Fisheries and Wildlife, 1998. Reformatted by Arlington Conservation Commission - 6/4/03

*Dorhan St (r. 107 Thesda)
new house
8/22/08*

ARLINGTON CONSERVATION COMMISSION
ORDER OF CONDITIONS -DOTHAN ST
NEW HOUSE (rear of 107 THESDA)

DEP FILE NO. 91-196

(c) Fertilizers may be used at the time of installation of any plant materials, and once more within a year after planting.

This condition shall not expire with the issuance of a Certificate of Compliance.

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34. When requesting a Certificate of Compliance for this Order of Conditions, the applicant must submit a written statement from a qualified professional certifying that the completed work complies with the plans referenced in this Order, or provide an as-built plan and statement describing any differences.

Eugene C. Brune
Great Middlesex S. Registrar

RE-VEGETATION MEMORANDUM

DATE: August 7, 2008
TO: Arlington Conservation Commission
FROM: Richard Kirby, *Senior Wetland Scientist*
RE: Dothan Street (rear of 107 Thesda Street)
 Re-vegetation Plan
PROJECT #: CafS\06-092.02

In accordance with Section 19 of the *Arlington Wetlands Protection Regulations (Regulations)*, LEC has prepared this Memorandum and a *Buffer Zone Re-vegetation Plan* dated August 7, 2008 to address vegetation removal associated with the proposed construction of a single-family dwelling and site appurtenances at the above-referenced site – portions of which are proposed within the outer portion of the Buffer Zone to a Bordering Vegetated Wetland (BVW).








A *General Site Description* is provided in the NOI Application Report dated July 24, 2008, which provides an overview of the plants observed by LEC during our site inspection. The property is a relatively small lot comprising 6,835 square feet. Of this 6,835 square feet, approximately 3,250 square feet are located in the outer portion of the 100-foot Buffer Zone. The majority of this site is comprised of open forest, with maintained lawn areas occurring along the eastern and southern property boundaries, which extend off site onto the Dothan Street Right-of-Way (a paper street) to the west, and Town of Arlington Land to the south. The site is separated from the BVW (located 60+/- feet to the south) by a 40+/- foot wide swath of lawn/landscaped area located on the Town of Arlington land.







Preceding the August 6, 2008 on-site attended by LEC and two representatives of the Conservation Commission, LEC re-evaluated the trees located in the Buffer Zone and estimated their location on the *Conservation Plan* submitted with the NOI Application. Specifically, LEC observed 7 trees with dbh greater than 4 inches in the Buffer Zone. The location of these trees is depicted on the *Buffer Zone Re-vegetation Plan*. The majority of these trees are located within close proximity (20+/- feet) of the dwelling location, which is proposed within a confining building envelope due to zoning setback requirements. In addition to these trees, the site contains numerous shrubs and small saplings.

Removal of the open forest vegetation is proposed in order to provide adequate construction access for the proposed dwelling and stormwater infiltration systems (proposed in the NOI Application), and maintain a modest lawn and landscape area surrounding the dwelling. In order to mitigate for this loss in vegetation, the Applicant proposes an aggressive planting regimen comprised of native sapling trees and shrubs, as depicted on the *Buffer Zone Re-vegetation Plan*, and in accordance with Section 19. (E) 4. of the

Regulations. Specifically, a total of 20 native trees ranging in dbh caliper of 2 to 3.5 inches are proposed, along with 30 native shrubs proposed at 2 to 3 feet high. Following the introduction of woody stock, the entire re-vegetation area will be seeded with the *New England Showy Wildflower Mix* available from New England Wetland Plants, Inc., (www.newp.com) or similar native groundcover seed mixture.

The planted trees and shrubs will be monitored annually for a period of three growing seasons in accordance with Section 19 E. (6) of the *Regulations*. Any dead trees/shrubs will be replaced with the same or similar native species.

<u>Existing Tree Species to be Removed</u>		Approximate Size (dbh)	<u>Proposed Replacement Saplings</u>		Size (dbh)	Planting Specifications	No.
Common Name	Genus/Species		Common Name	Genus/Species			
Red Maple	<i>Acer rubrum</i>	7"	 Red maple	<i>Acer rubrum</i>	2" - 3.5"	clusters of 2 to 4	3
Red Maple	<i>Acer rubrum</i>	4"	 Red maple	<i>Acer rubrum</i>	2" - 3.5"	clusters of 2 to 4	2
Box Elder	<i>Acer negundo</i>	5"	 Box Elder	<i>Acer negundo</i>	2" - 3.5"	clusters of 2 to 4	2
Black Walnut	<i>Juglans nigra</i>	13"	 Black Walnut	<i>Juglans nigra</i>	2" - 3.5"	clusters of 2 to 4	4
Norway Maple	<i>Acer platanoides</i>	6"	 Silver Maple	<i>Acer saccharinum</i>	2" - 3.5"	clusters of 2 to 4	2
Black Walnut	<i>Acer platanoides</i>	6"	 Black Walnut	<i>Acer platanoides</i>	2" - 3.5"	clusters of 2 to 4	2
Silver Maple (5-Meter)	<i>Acer saccharinum</i>	18" (average)	 Silver Maple	<i>Acer saccharinum</i>	2" - 3.5"	clusters of 2 to 4	5
						Total Saplings:	20

<u>Proposed Shrubs</u>		Size (dbh)	Planting Specifications	No.
Common Name	Genus/Species			
 Alternate-leaf Dogwood	<i>Cornus alternifolia</i>	2 - 3' min.	clusters of 2 to 4	5
 American Hazelnut	<i>Acer saccharinum</i>	2 - 3' min.	clusters of 2 to 4	5
 Serviceberry	<i>Amelanchier canadensis</i>	2 - 3' min.	clusters of 2 to 4	5
 Bayberry	<i>Myrica pensylvanica</i>	2 - 3' min.	clusters of 2 to 4	5
 Black Chokeberry	<i>Aronia melanocarpa</i>	2 - 3' min.	clusters of 2 to 4	5
 Virginia Rose	<i>Rosa virginiana</i>	2 - 3' min.	clusters of 2 to 4	5
Total Shrubs:				30

<u>Proposed Groundcover</u>	
<input type="checkbox"/> New England Showy Wildflower Mix (Application Rate: 23 lbs/acre (1900 Sq. ft./lb.))	
Creeping Red Fescue	<i>Festuca rubra</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Indian Grass	<i>Sorghastrum nutans</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Canada Wild Rye	<i>Elymus canadensis</i>
New York Aster	<i>Aster novae-belgii</i>
Common Milkweed	<i>Asclepias syriaca</i>
Virginia Wild Rye	<i>Elymus virginicus</i>
Ox Eye Sunflower	<i>Heliopsis helianthoides</i>
Black Eyed Susan	<i>Rudbeckia hirta</i>
Wild Senna	<i>Senna hebecarpa</i>
Early Goldenrod	<i>Solidago juncea</i>
Wild Indigo	<i>Baptisia tinctoria</i>
Showy tick-teafoil	<i>Desmodium canadense</i>
Grass Leaved Goldenrod	<i>Euthamia graminifolia</i>
Virginia Mountain Mint	<i>Pycnanthemum virginianum</i>

Buffer Zone Re-Vegetation Plan

Dothan Street
(rear of 107 Thesda Street)
Arlington, Ma

(Sheet 2 of 2)

August 7, 2008

LEC File #: CafS\06-092.02

PREPARED BY:
LEC
Environmental Consultants, Inc.
107 Audubon Road
Building 2, Suite 110
Wakefield, MA 01880
781.245.2500
781.245.6677 fax
email: northlec@lceenvironmental.com
www.lceenvironmental.com



received: 9 May 2019
2:25 pm

Riley Landscaping Inc.
Wakefield, MA 01880
Rileylandscapinginc@gmail.com

Michael Wilson
54 Dothan Street
Arlington, Ma 02474

Buffer Zone Re-Vegetation Plan

Riley Landscaping was contacted to install the planting plan put together by LEC Environmental Consultants Inc. and met with Michael Wilson on his property to review the planting. Michael's concern was that it would create more of a vegetative wall than blend into the natural landscape that exists on the boarder of his property. I agree with Michael that the planting plan put together will create a manicured wall between the natural vegetation and his property rather than creating a natural vegetative border during re-vegetation.

The plan shows seven trees with a total caliper of 59" were removed from the 100' buffer zone during construction. The fifty plants that have been provided is assumed to be based on replacing caliper rather than a quantity of trees but in a professional opinion it is over planting the area and disrupting the natural landscape to evolve through succession. It is agreed that plants do need to be replaced but focus on what was removed to rebuild the natural landscape that existed prior to construction.

Riley Landscaping Inc. suggested we focus on planting the back corners of the property with the specific plants (if available) that were removed and over a period of time the growth of the plants will meet the caliper removed and blend with the natural landscape. The understory will be planted with shrubs in the open spaces to provide help in succession as well as berries and flowers for wildlife.

Below is a list of plants removed from the site:

Acer rubrum – Red Maple (7")

Acer rubrum – Red Maple (4")

Acer negundo – Box Elder (5")

Juglans nigra – Black Walnut (13")

Juglans nigra – Black Walnut (6")

Acer platanoides – Norway Maple (6")

Acer saccharinum – Silver Maple (18")

Plants to be planted:

Trees:

Acer rubrum - 'Autumn Blaze' Swamp Red Maple (2-2.5") Due to Availability
Quantity – 2

Betula nigra 'Heritage' – 'Heritage' River Birch (8-10') Due to Availability for
substitution of *Acer negundo* - Box Elder and *Acer saccharinum* – Silver Maple
Quantity – 2

Pinus strobus – Eastern White Pine (8-10')
Quantity – 1

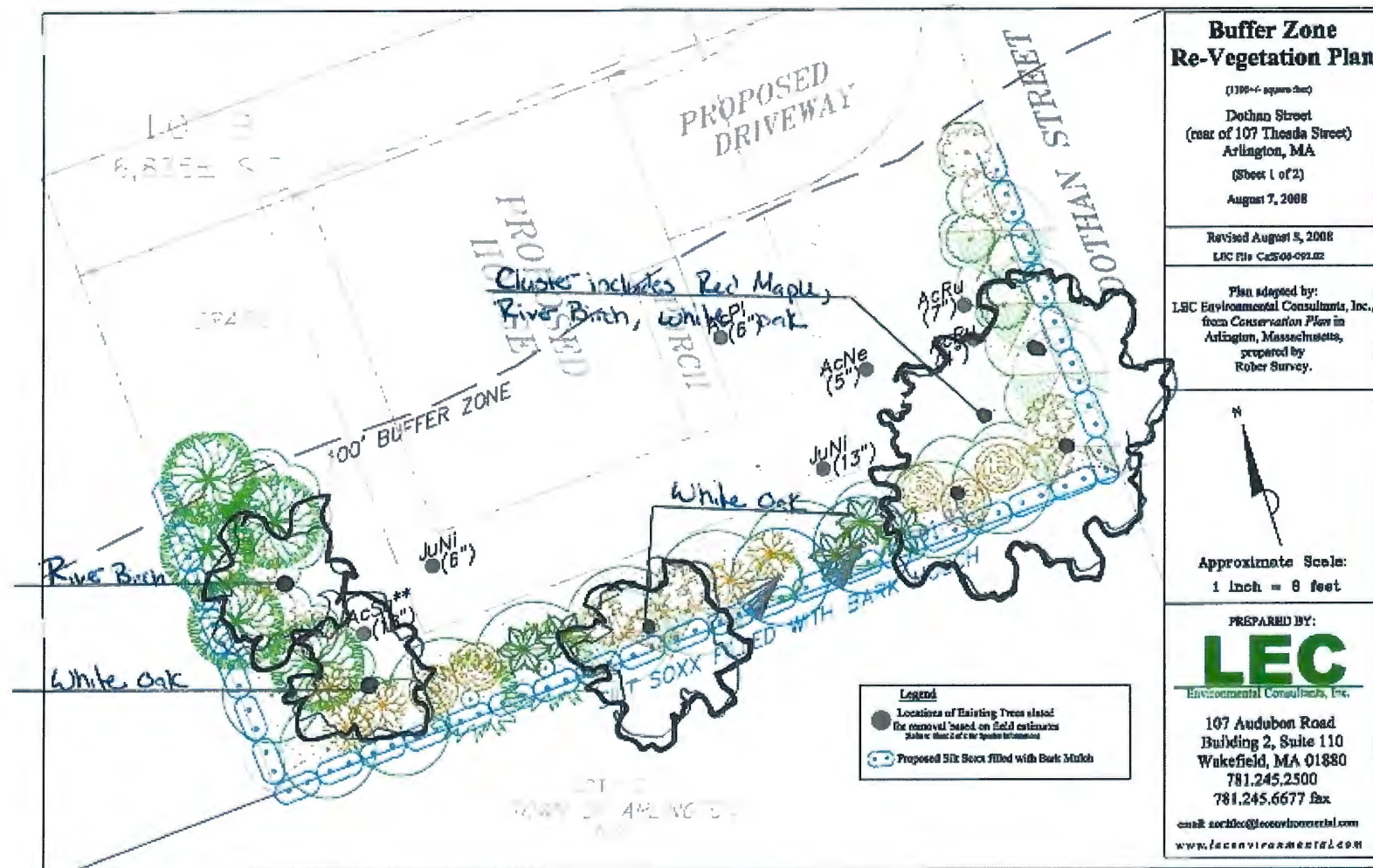
Quercus bicolor – Swamp White Oak (2-2.5") Due to Availability for substitution of
Juglans nigra – Black Walnut
Quantity – 2

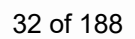
Shrubs:

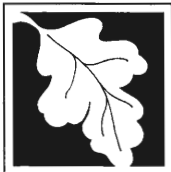
Amelanchier canadensis – Shadblow Serviceberry (5-6')
Quantity – 2

Cornus alternifolia – Alternate-leaf Dogwood (15 Gallon)
Quantity – 2

In conclusion, these plants fit the native landscape as a wetland border planting
with both understory plants providing flowers and fruits to attract wildlife







Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 8A – Request for Certificate of Compliance
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

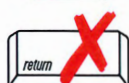
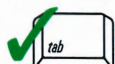
91-196

Provided by DEP

A. Project Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

1. This request is being made by:

Michael Terry Wilson and Daniela Cipolletta

Name

54 Dothan Street

Mailing Address

Arlington

City/Town

MA

State

02474

Zip Code

615-967-5400

Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

Sandy Caffelle

Applicant

8/22/2008

Dated

91-196

DEP File Number

3. The project site is located at:

54 Dothan Street (rear of 107 Thesda street)

Street Address

113

Assessors Map/Plat Number

Arlington

City/Town

Block,3, Lot 7

Parcel/Lot Number

4. The final Order of Conditions was recorded at the Registry of Deeds for:

Sandy Caffelle

Property Owner (if different)

Middlesex

County

32866

Book

505

Page

N/A

Certificate (if registered land)

5. This request is for certification that (check one):

☒ the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☒ the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

Please find enclosed descriptions and pictures of the proper satisfaction of planting plan as documented by overseeing landscaper

☐ the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

91-196

Provided by DEP

A. Project Information (cont.)

6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

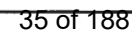
☒ Yes

If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

☐ No

B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an *Adjudicatory Hearing Final Decision*, submit this request to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>).





Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

91-196

Provided by DEP

A. Project Information

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

1. This request is being made by:

Winnie and Camille Prost

Name

54 Dothan Street

Mailing Address

Arlington

City/Town

MA

State

Zip Code

781 475 7808

Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

Sandy Caffelle

Applicant

August 22, 2008

Dated

91-106

DEP File Number

3. The project site is located at:

54 Dothan Street

Street Address

Arlington

City/Town

113

Assessors Map/Plat Number

3-7

Parcel/Lot Number

4. The final Order of Conditions was recorded at the Registry of Deeds for:

Sandy Caffelle

Property Owner (if different)

Middlesex South

County

51644

Book

233

Page

2008 0014518

Certificate (if registered land)

5. This request is for certification that (check one):

☐ the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

☒ the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

A partial Certificate of Compliance was issued in 2019, requiring additional time to monitor the success of the mitigation plantings. This Request for Certificate of Compliance addresses the longevity of the required plantings.

☐ the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

91-196

Provided by DEP

A. Project Information (cont.)

6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

☐ Yes

If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

☒ No

B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an Adjudicatory Hearing Final Decision, submit this request to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>).

Notice of Intent Application



December 22, 2021

Subject Property

1021 and 1025 Massachusetts Avenue
Parcel IDs: 55-2-19 and 55-2-20
Arlington, Massachusetts

Applicant

MAJ Investment, LLC
Matthew P. Maggiore, Contact
13 Wheeling Avenue
Woburn, MA 01801

LEC Environmental Consultants, Inc.

380 Lowell Street
Suite 101
Wakefield, MA 01880
781-245-2500

www.lecenvironmental.com
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December 22, 2021

Hand Delivery

Arlington Conservation Commission
Arlington Town Hall Annex
730 Massachusetts Avenue
Arlington, MA 02476

Re: Notice of Intent Application
1021 and 1025 Massachusetts Avenue
Parcel IDs: 55-2-19 and 55-2-20
Arlington, Massachusetts

[LEC File #: TMC0\21-334.02]

Dear Members of the Conservation Commission:

On behalf of the Applicant, MAJ Investment, LLC (Matthew P. Maggiore, Contact), LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Arlington Conservation Commission to demolish two (2) structures and associated driveways, parking lots, and site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building (under Chapter 40B) with ground-level parking garage and retail space. Portions of the proposed project are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management and native revegetation, establishment of a meadow, and stormwater management are proposed.

This NOI Application is being filed under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*) and its implementing Regulations (310 CMR 10.00, the *Act Regulations*) only, as the Arlington Zoning Board of Appeals will administer the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*) and its implementing *Wetlands Protection Regulations* (March 1, 2018, the *Bylaw Regulations*) under the Comprehensive Permit process.

Patriot Engineering has prepared the enclosed *1021 & 1025 Massachusetts Avenue Notice of Intent Plan Set* dated December 9, 2021 showing the existing and proposed conditions (Appendix B), and the *Stormwater Report* also dated December 9, 2021 (Appendix C).

Enclosed please find a check made payable to the Town of Arlington in the amount of Eight Hundred Dollars (\$800.00) for the purpose of filing this Application under State guidelines. A check payable to the Commonwealth of Massachusetts in the amount of Seven Hundred, Seventy-Five (\$775.00) has been mailed to the DEP Lockbox with a copy of the NOI Wetland Fee Transmittal Form.

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road
Suite 1
Plymouth, MA 02360
508.746.9491

380 Lowell Street
Suite 101
Wakefield, MA 01880
781.245.2500

100 Grove Street
Suite 302
Worcester, MA 01605
508.753.3077

P.O. Box 590
Rindge, NH 03461
603.899.6726

680 Warren Avenue
Suite 3
East Providence, RI 02914
401.685.3109

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PLYMOUTH, MA

WAKEFIELD, MA

WORCESTER, MA

RINDGE, NH

EAST PROVIDENCE, RI



Thank you for your consideration of this Application. We look forward to meeting with you at the January 6, 2022 Public Hearing. Should you have any questions, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or at rkirby@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Richard A. Kirby", is written over a faint, light-colored circular stamp.

Richard A. Kirby

Senior Wetland Scientist

cc: DEP, Northeast Region
 MAJ Investment, LLC
 Paul Feldman, Attorney
 1021 Massachusetts Avenue, LLC
 Johnathan M. Nyberg & Sara Q. Dolan
 Patriot Engineering

jah: projects\21-334.02\NOIRreport.doc

- i. WPA Form 3 – Notice of Intent
- ii. WPA Appendix B – Wetland Fee Transmittal Form
- iii. Affidavit of Service
- iv. Letter to Abutters
- v. Abutter Notification Form
- vi. Certified List of Abutters

Notice of Intent Report

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Appendix A

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map

Appendix B

1021 & 1025 Massachusetts Avenue Notice of Intent Plan Set, dated December 9, 2021,
prepared by Patriot Engineering

Appendix C

Stormwater Report, dated December 9, 2021, prepared by Patriot Engineering



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

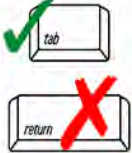
Document Transaction Number

Arlington

City/Town

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

1021 and 1025 Massachusetts Avenue

a. Street Address

Arlington

b. City/Town

02476

c. Zip Code

Latitude and Longitude:

42.420360 N

d. Latitude

-71.168870 W

e. Longitude

1021 Mass Ave. Parcel ID: 55-2-19

f. Assessors Map/Plat Number

1025 Mass Ave. Parcel ID: 55-2-20

g. Parcel /Lot Number

2. Applicant:

Matthew P.

a. First Name

Maggiore

b. Last Name

MAJ Investment, LLC

c. Organization

13 Wheeling Avenue

d. Street Address

Woburn

e. City/Town

MA

f. State

01801

g. Zip Code

781-935-6100

h. Phone Number

n/a

i. Fax Number

matt@maggiore.co

j. Email Address

3. Property owner (required if different from applicant): ☒ Check if more than one owner

See attached List

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Richard A.

a. First Name

Kirby

b. Last Name

LEC Environmental Consultants, Inc.

c. Company

380 Lowell Street, Suite 101

d. Street Address

Wakefield

e. City/Town

MA

f. State

01880

g. Zip Code

781-245-2500

h. Phone Number

781-245-6677

i. Fax Number

rkirby@lecenvironmental.com

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

\$1,575.00

a. Total Fee Paid

\$775.00

b. State Fee Paid

\$800.00

c. City/Town Fee Paid



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

A. General Information (continued)

6. General Project Description:

The Applicant proposes to demolish two (2) structures and associated driveways, parking lots, and site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building (under chapter 40B) with ground-level parking garage and retail space. Portions of the proposed project are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management, native revegetation, a meadow, and stormwater management are proposed.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input checked="" type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input type="checkbox"/> Other | |

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex South

a. County

1021 Massachusetts Avenue: 72517/224

c. Book

b. Certificate # (if registered land)

1025 Massachusetts Avenue: 57969/298

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- ☒ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area	Mill Brook 1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- ☐ 25 ft. - Designated Densely Developed Areas only
- ☐ 100 ft. - New agricultural projects only
- ☒ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 20,229±
square feet

4. Proposed alteration of the Riverfront Area:

<u>4,749±</u>	<u>0</u>	<u>4,749±</u>
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? ☒ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☒ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



Massachusetts Department of Environmental Protection
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WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet _____ 2. cubic yards dredged _____	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. <input type="checkbox"/> Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	1. linear feet _____	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet _____	
h. <input type="checkbox"/> Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet _____	
	2. cubic yards dredged _____	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet _____	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged _____	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet _____	
4. <input type="checkbox"/> Restoration/Enhancement		
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.		
a. square feet of BVW _____	b. square feet of Salt Marsh _____	

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings _____

b. number of replacement stream crossings _____



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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City/Town

C. Other Applicable Standards and Requirements

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. ☐ Yes ☒ No **If yes, include proof of mailing or hand delivery of NOI to:**

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

2021

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

1. ☐ Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
2. ☐ Assessor's Map or right-of-way plan of site
2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

C. Other Applicable Standards and Requirements (cont'd)

- (c) ☐ MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) ☐ Vegetation cover type map of site

- (e) ☐ Project plans showing Priority & Estimated Habitat boundaries

- (f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.

a. NHESP Tracking #

b. Date submitted to NHESP

3. ☐ Separate MESA review completed.

Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

- a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c. ☐ Is this an aquaculture project?

- d. ☐ Yes ☒ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users:

Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
 a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
 b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
 a. ☐ Yes ☒ No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
 a. ☐ Yes ☒ No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
 a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
 1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. ☒ A portion of the site constitutes redevelopment
 3. ☐ Proprietary BMPs are included in the Stormwater Management System.
- b. ☐ No. Check why the project is exempt:
 1. ☐ Single-family house
 2. ☐ Emergency road repair
 3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

- ☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☐ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. ☐ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

D. Additional Information (cont'd)

3. ☐ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Notice of Intent Plan Set

a. Plan Title

Patriot Engineering

Michael J. Novak

b. Prepared By

c. Signed and Stamped by

December 9, 2021

1" = 20'

d. Final Revision Date

e. Scale

Stormwater Management Report

December 9, 2021

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. ☒ Attach NOI Wetland Fee Transmittal Form
9. ☒ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

13582

12/10/2021

2. Municipal Check Number

3. Check date

13584

12/10/2021

4. State Check Number

5. Check date

Maggiore Construction Corporation

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Arlington

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

<p>1. Signature of Applicant</p> <p><i>[Signature]</i></p> <p>DocuSigned by:</p> <p><i>Jonathan M. Nyberg</i></p>	<p>2. Date</p> <p><i>12/7/21</i></p> <p>12/9/2021</p>
<p>3. Signature of Property Owner (if different)</p> <p><i>[Signature]</i></p>	<p>4. Date</p> <p><i>12/9/21</i></p>
<p>5. Signature of Property Owner (if different)</p> <p><i>[Signature]</i></p>	<p>6. Date</p> <p>12/8/2021</p>
<p>7. Signature of Representative (if any)</p>	<p>8. Date</p>

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a copy of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
NOI Wetland Fee Transmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

1021 and 1025 Massachusetts Avenue

a. Street Address

13584

c. Check number

Arlington

b. City/Town

\$775.00

d. Fee amount

2. Applicant Mailing Address:

Matthew

a. First Name

Maggiore

b. Last Name

MAJ Investment, LLC

c. Organization

13 Wheeling Avenue

d. Mailing Address

Woburn

e. City/Town

MA

f. State

01801

g. Zip Code

781-935-6100

h. Phone Number

n/a

i. Fax Number

matt@maggiore.co

j. Email Address

3. Property Owner (if different):

See attached list

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3b. Multi-Unit Dwelling	1.5 (Riverfront Area)	\$1050.00	\$1,575.00
Step 5/Total Project Fee:			\$1,575.00

Step 6/Fee Payments:

Total Project Fee:	<u>\$1,575.00</u>
	a. Total Fee from Step 5
State share of filing Fee:	<u>\$775.00</u>
	b. 1/2 Total Fee less \$12.50
City/Town share of filling Fee:	<u>\$800.00</u>
	c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

Property Owners

1021 Massachusetts Avenue:

1021 Massachusetts Avenue, LLC

Contact: Ed Chaglassian

1021 Massachusetts Avenue

Arlington, MA 02476

Email: echaglassian@gmail.com

Phone: 617-515-6653

1025 Massachusetts Avenue:

Johnathan M. Nyberg & Sara Q. Dolan

P.O. Box 292

Arlington, MA 02476

Email: johnathannyberg@oldnewenglandproperties.com

Phone: 781-883-7259

AFFIDAVIT OF SERVICE

Under the
Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40) and
its implementing *Regulations* (310 CMR 10.00)

I, Sharon A. Sullivan, on behalf of MAJ Investment, LLC, hereby certify under the pains and penalties of perjury that on December 22, 2021 I gave notification to abutters in compliance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40) and its implementing *Regulations* (310 CMR 10.00) in connection with the following matter:

A Notice of Intent Application filed under the *Massachusetts Wetlands Protection Act* by LEC Environmental Consultants, Inc. on behalf of the Applicant, MAJ Investment, LLC, with the Town of Arlington Conservation Commission on December 22, 2021 for properties located at 1021 Massachusetts Avenue (Assessor's Parcel ID: 55-2-19) and 1025 Massachusetts Avenue (Assessor's Parcel ID: 55-2-20) in Arlington, Massachusetts.

The form of notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Sharon A. Sullivan
Sharon A. Sullivan
Permitting Technician

12/22/2021
Date

December 22, 2021

CERTIFIED MAIL

«Name»

«Name2»

«Address»

«City», «State» «Zip»

Re: Notice of Intent Application

[LEC File #: TMC0\21-334.02]

1021 Massachusetts Avenue (Assessor's Parcel ID: 55-2-19)

1025 Massachusetts Avenue (Assessor's Parcel ID: 55-2-20)

Arlington, Massachusetts

Dear Abutter:

On behalf of the Applicant, MAJ Investment, LLC, LEC Environmental Consultants, Inc. (LEC) has filed a Notice of Intent Application with the Arlington Conservation Commission to demolish two structures and associated driveways, parking lots, and associated site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building with ground-level parking garage and retail space at 1021 and 1025 Massachusetts Avenue in Arlington, Massachusetts. This NOI Application is being filed under the *Massachusetts Wetlands Protection Act* (the *Act*, M.G.L. c. 131, s. 40) and its implementing *Regulations* (the *Act Regulations*, 310 CMR 10.00). Portions of the proposed activities are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management, a meadow, and stormwater management are proposed.

The Notice of Intent Application and accompanying plans are available for review by contacting the Arlington Conservation Commission. The remote Public Hearing will be held on January 6, 2022 beginning at 7:30 p.m., in accordance with the provisions of the *Act* and its implementing *Regulations*. Further information regarding this application will be published at least five (5) days in advance in *The Arlington Advocate*. Notice of the Public Hearing will also be posted at the Arlington Town Hall at least 48 hours in advance. Please check the Town's website and the Board/Committee's page for any updated information on the meeting.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

LEC Environmental Consultants, Inc.



Richard A. Kirby
Senior Wetland Scientist

LEC Environmental Consultants, Inc.

www.lecenvironmental.com

12 Resnik Road
Suite 1
Plymouth, MA 02360
508.746.9491

PLYMOUTH, MA

380 Lowell Street
Suite 101
Wakefield, MA 01880
781.245.2500

WAKEFIELD, MA

100 Grove Street
Suite 302
Worcester, MA 01605
508.753.3077

WORCESTER, MA

P.O. Box 590
Rindge, NH 03461
603.899.6726

RINDGE, NH

680 Warren Avenue
Suite 3
East Providence, RI 02914
401.685.3109

EAST PROVIDENCE, RI

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Notification to Abutters Under the

Massachusetts Wetlands Protection Act

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the Applicant is MAJ Investment, LLC, 13 Wheeling Avenue, Woburn, Massachusetts.
- B. The Applicant has filed a Notice of Intent Application with the Conservation Commission for the municipality of Arlington, Massachusetts seeking permission to remove, fill, dredge or alter an Area Subject to Protection under Wetlands Protection Act (General Laws Chapter 131, Section 40).
- C. The activity is proposed on lots located at 1021 Massachusetts Avenue (Assessor's Parcel ID: 55-2-19) and 1025 Massachusetts Avenue (Assessor's Parcel ID: 55-2-20), Arlington, Massachusetts.
- D. Copies of the Notice of Intent Application may be examined by contacting the Arlington Conservation Commission at (781) 316-3012.

For more information, call: LEC Environmental Consultants, Inc. (the Applicant's representative) at (781) 245-2500.

- E. Copies of the Notice of Intent Application may be obtained from LEC Environmental Consultants, Inc. (the applicant's representative) by calling (781) 245-2500 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. A fee may be charged for each copy requested.
- F. Information regarding the public hearing may be obtained from the Arlington Conservation Commission (the regulatory agency) by calling (781) 316-3012.

NOTE: Notice of the Public Hearing, including its date, time, and place, will be published at least five (5) days in advance in The Arlington Advocate.

NOTE: Notice of the public hearing will also be posted at the Arlington Town Hall not less than 48 hours in advance.

NOTE: You also may contact the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:
Northeast Region: 978-694-3200



Office of the
Board of Assessors
Robbins Memorial Town Hall
Arlington, MA 02476
(781) 316-3050
Assessors@town.arlington.ma.us

Abutters List

Date: December 13, 2021

Subject Property Address: 1021 MASS AVE Arlington, MA
Subject Property ID: 55-2-19

Search Distance: 100 Feet
CONSERVATION

The Board of Assessors certifies the names and addresses of requested parties in interest, all abutters within 100 feet of the property lines, of subject property.

A handwritten signature in black ink, which appears to read "Robert E. Greeley". The signature is written in a cursive style with a large, looping initial "R".

Board of Assessors

Abutters List

Date: December 13, 2021

Subject Property Address: 1021 MASS AVE Arlington, MA
Subject Property ID: 55-2-19

Search Distance: 100 Feet
Conservation

Prop ID: 128-3-30.A
Prop Location: 4-8 MENOTOMY RD Arlington, MA
Owner: SULLIVAN WILLIAM H TRS-ETAL
Co-Owner: M/T EMERALD ASSOCIATES
Mailing Address:
P.O. BOX 15
CARLISLE, MA 01741

Prop ID: 128-3-31.A
Prop Location: 1026 MASS AVE Arlington, MA
Owner: JOHNSON REALTY INC
Co-Owner:
Mailing Address:
1026 MASS AVE SUITE 1
ARLINGTON, MA 02476

Prop ID: 128-3-6.B
Prop Location: 2 ORCHARD PL Arlington, MA
Owner: HOUSING CORP OF ARLINGTON
Co-Owner:
Mailing Address:
252 MASS AVE
ARLINGTON, MA 02474

Prop ID: 128-3-7
Prop Location: 1016 MASS AVE Arlington, MA
Owner: HOUSING CORP OF ARLINGTON
Co-Owner:
Mailing Address:
252 MASSACHUSETTS AVE
ARLINGTON, MA 02474

Prop ID: 55-2-15
Prop Location: 1007 MASS AVE Arlington, MA
Owner: TOWN OF ARLINGTON FIRE DEPT
Co-Owner:
Mailing Address:
730 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-16
Prop Location: 1011 MASS AVE Arlington, MA
Owner: BAYERL ELIZABETH A
Co-Owner:
Mailing Address:
1011 MASS AVENUE
ARLINGTON, MA 02476

Prop ID: 55-2-17
Prop Location: 1013-R MASS AVE Arlington, MA
Owner: CAMPBELL DIONNE M/DEVON L
Co-Owner:
Mailing Address:
1013R MASS AVENUE
ARLINGTON, MA 02476

Prop ID: 55-2-18
Prop Location: 1017 MASS AVE Arlington, MA
Owner: ERCOLINI MICHAEL
Co-Owner:
Mailing Address:
1017 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-19
Prop Location: 1021 MASS AVE Arlington, MA
Owner: 1021 MASSACHUSETTS AVENUE LLC
Co-Owner:
Mailing Address:
1021 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-20
Prop Location: 1025-1027 MASS AVE Arlington, MA
Owner: NYBERG JONATHAN M &
Co-Owner: DOLAN SARA Q
Mailing Address:
PO BOX 292
ARLINGTON, MA 02476

Prop ID: 55-2-21
Prop Location: 1033 MASS AVE Arlington, MA
Owner: 1033 MASS AVE ARLINGTON LLC
Co-Owner:
Mailing Address:
7 CENTRAL ST SUITE 120
ARLINGTON, MA 02476

Prop ID: 55-2-24
Prop Location: 11 BRATTLE ST Arlington, MA
Owner: JOHNSTON LEROY N JR
Co-Owner: JOHNSTON CYNTHIA A
Mailing Address:
58 RICHFIELD RD
ARLINGTON, MA 02474

Prop ID: 55-2-25
Prop Location: 17 BRATTLE ST Arlington, MA
Owner: JOHNSON JUDITH N
Co-Owner:
Mailing Address:
1090 NORTH ROAD
CARISLE, MA 01741

Prop ID: 55.B-1-101
Prop Location: 993 MASS AVE UNIT 101 Arlington, MA
Owner: BUCHANAN ELAINE M
Co-Owner:
Mailing Address:
76 BEECH ST UNIT 2
BELMONT, MA 02478

Prop ID: 55.B-1-102
Prop Location: 993 MASS AVE UNIT 102 Arlington, MA
Owner: LIN JANE E
Co-Owner: LEE KEN A
Mailing Address:
993 MASS AVENUE #102
ARLINGTON, MA 02476

Prop ID: 55.B-1-103
Prop Location: 993 MASS AVE UNIT 103 Arlington, MA
Owner: MC KINNON GARRETT
Co-Owner:
Mailing Address:
239 PLEASANT STREET
ARLINGTON, MA 02476

Prop ID: 55.B-1-104
Prop Location: 993 MASS AVE UNIT 104 Arlington, MA
Owner: FABIANO DIANE M
Co-Owner:
Mailing Address:
993 MASS AVE #104
ARLINGTON, MA 02474

Prop ID: 55.B-1-105
Prop Location: 993 MASS AVE UNIT 105 Arlington, MA
Owner: URBAN JULIE A/ TRUSTEE
Co-Owner: JULIE A URBAN REVOCABLE LIVING
Mailing Address:
993 MASS AVE #105
ARLINGTON, MA 02476

Prop ID: 55.B-1-106
Prop Location: 993 MASS AVE UNIT 106 Arlington, MA
Owner: BOWES ROBERT E & ELAINE M/ TRS
Co-Owner: ROBERT E BOWES TRUST
Mailing Address:
26 LAKEVIEW
ARLINGTON, MA 02476

Prop ID: 55.B-1-107
Prop Location: 993 MASS AVE UNIT 107 Arlington, MA
Owner: SHANNON VIRGINIA A LIFE ESTATE
Co-Owner:
Mailing Address:
993 MASS AVENUE #107
ARLINGTON, MA 02476

Prop ID: 55.B-1-108
Prop Location: 993 MASS AVE UNIT 108 Arlington, MA
Owner: HART ASHLEY
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE
UNIT 108
ARLINGTON, MA 02476

Prop ID: 55.B-1-109
Prop Location: 993 MASS AVE UNIT 109 Arlington, MA
Owner: LENNEY CHRISTOPHER
Co-Owner:
Mailing Address:
993 MASS AVENUE #109
ARLINGTON, MA 02476

Prop ID: 55.B-1-110
Prop Location: 993 MASS AVE UNIT 110 Arlington, MA
Owner: REED MARY ELLEN
Co-Owner:
Mailing Address:
993 MASS AVE #110
ARLINGTON, MA 02476

Prop ID: 55.B-1-111
Prop Location: 993 MASS AVE UNIT 111 Arlington, MA
Owner: OSHEA EILEEN
Co-Owner:
Mailing Address:
993 MASS AVE #111
ARLINGTON, MA 02476

Prop ID: 55.B-1-112
Prop Location: 993 MASS AVE UNIT 112 Arlington, MA
Owner: LIN CHUAN
Co-Owner: CAO HUAIGU
Mailing Address:
993 MASS AVENUE #112
ARLINGTON, MA 02476

Prop ID: 55.B-1-113
Prop Location: 993 MASS AVE UNIT 113 Arlington, MA
Owner: SHEEHAN MEAGHAN
Co-Owner:
Mailing Address:
581 OLD STRAWBERRY HILL RD
CENTERVILLE MA, MA 02632

Prop ID: 55.B-1-114
Prop Location: 993 MASS AVE UNIT 114 Arlington, MA
Owner: IKEMOTO BRIAN Y
Co-Owner:
Mailing Address:
40 GILMAN ST
SOMERVILLE, MA 02145

Prop ID: 55.B-1-115
Prop Location: 993 MASS AVE UNIT 115 Arlington, MA
Owner: CLERMONT JACQUELYN M
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE #115
ARLINGTON, MA 02476

Prop ID: 55.B-1-117
Prop Location: 993 MASS AVE UNIT 117 Arlington, MA
Owner: CHYI SHYUE-LING
Co-Owner:
Mailing Address:
993 MASS AVENUE #117
ARLINGTON, MA 02476

Prop ID: 55.B-1-118
Prop Location: 993 MASS AVE UNIT 118 Arlington, MA
Owner: WONG ELIZABETH & MAYWOOD
Co-Owner: MARTIN PATRICIA
Mailing Address:
993 MASS AVENUE UNIT 118
ARLINGTON, MA 02476

Prop ID: 55.B-1-119
Prop Location: 993 MASS AVE UNIT 119 Arlington, MA
Owner: KUNSMAN JANET M
Co-Owner:
Mailing Address:
134 WOODSIDE LANE
ARLINGTON, MA 02474

Prop ID: 55.B-1-120
Prop Location: 993 MASS AVE UNIT 120 Arlington, MA
Owner: BAGHDADI REZA
Co-Owner: SOLOUKI SAEIDEH
Mailing Address:
993 MASS AVE #201
ARLINGTON, MA 02476

Prop ID: 55.B-1-121
Prop Location: 993 MASS AVE UNIT 121 Arlington, MA
Owner: PANTAZOPOULOS NICHOLAS
Co-Owner:
Mailing Address:
993 MASS AVE #121
ARLINGTON, MA 02476

Prop ID: 55.B-1-122
Prop Location: 993 MASS AVE UNIT 122 Arlington, MA
Owner: LIVINGSTONE DAVID J
Co-Owner:
Mailing Address:
993 MASS AVENUE #122
ARLINGTON, MA 02476

Prop ID: 55.B-1-123
Prop Location: 993 MASS AVE UNIT 123 Arlington, MA
Owner: ARLINGTON HOUSING AUTHORITY
Co-Owner:
Mailing Address:
4 WINSLOW ST
ARLINGTON, MA 02476

Prop ID: 55.B-1-124
Prop Location: 993 MASS AVE UNIT 124 Arlington, MA
Owner: WILEY JUSTIN
Co-Owner:
Mailing Address:
993 MASS AVE #124
ARLINGTON, MA 02476

Prop ID: 55.B-1-125
Prop Location: 993 MASS AVE UNIT 125 Arlington, MA
Owner: CLABAUGH JERRY A
Co-Owner:
Mailing Address:
993 MASS AVENUE #125
ARLINGTON, MA 02476

Prop ID: 55.B-1-126
Prop Location: 993 MASS AVE UNIT 126 Arlington, MA
Owner: EISENHART HENRY
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 126
ARLINGTON, MA 02476

Prop ID: 55.B-1-127
Prop Location: 993 MASS AVE UNIT 127 Arlington, MA
Owner: PASQUALE FRANCO
Co-Owner:
Mailing Address:
993 MASS AVE #127
ARLINGTON, MA 02474

Prop ID: 55.B-1-128
Prop Location: 993 MASS AVE UNIT 128 Arlington, MA
Owner: LAM VINCENT
Co-Owner: ZHAO YAN
Mailing Address:
993 MASS AVE UNIT 128
ARLINGTON, MA 02476

Prop ID: 55.B-1-201
Prop Location: 993 MASS AVE UNIT 201 Arlington, MA
Owner: BAGHDADI REZA
Co-Owner: SOLOUKI SAEIDEH
Mailing Address:
993 MASS AVE #201
ARLINGTON, MA 02476

Prop ID: 55.B-1-202
Prop Location: 993 MASS AVE UNIT 202 Arlington, MA
Owner: PARATORE JOSEPHINE
Co-Owner:
Mailing Address:
28 CROSS STREET
BELMONT, MA 02478

Prop ID: 55.B-1-203
Prop Location: 993 MASS AVE UNIT 203 Arlington, MA
Owner: DANALEVICH JENNIFER
Co-Owner:
Mailing Address:
1 CONN ST #3
WOBURN, MA 01801

Prop ID: 55.B-1-204
Prop Location: 993 MASS AVE UNIT 204 Arlington, MA
Owner: ILIC KATARINA
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 204
ARLINGTON, MA 02476

Prop ID: 55.B-1-205
Prop Location: 993 MASS AVE UNIT 205 Arlington, MA
Owner: GUO FEIFEI
Co-Owner:
Mailing Address:
993 MASS AVE #205
ARLINGTON, MA 02474

Prop ID: 55.B-1-206
Prop Location: 993 MASS AVE UNIT 206 Arlington, MA
Owner: KAHN ELIZABETH/ TRUSTEE
Co-Owner: BURKE REALTY TRUST
Mailing Address:
2424 EUCLID ST
SANTA MONICA, CA 90405

Prop ID: 55.B-1-207
Prop Location: 993 MASS AVE UNIT 207 Arlington, MA
Owner: ILIC KATARINA
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 204
ARLINGTON, MA 02476

Prop ID: 55.B-1-208
Prop Location: 993 MASS AVE UNIT 208 Arlington, MA
Owner: FLANIGAN ELAINE & JAMES/ TRS
Co-Owner: JAMES M FLANIGAN TRUST
Mailing Address:
190 BARLEY NECK ROAD
ORLEANS, MA 02653

Prop ID: 55.B-1-209
Prop Location: 993 MASS AVE UNIT 209 Arlington, MA
Owner: HORAN MATTHEW R
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 209
ARLINGTON, MA 02474

Prop ID: 55.B-1-210
Prop Location: 993 MASS AVE UNIT 210 Arlington, MA
Owner: DALLAS ANN F
Co-Owner:
Mailing Address:
993 MASS AVE #210
ARLINGTON, MA 02476

Prop ID: 55.B-1-211
Prop Location: 993 MASS AVE UNIT 211 Arlington, MA
Owner: DILEO HEIDI R RUTSTEIN
Co-Owner:
Mailing Address:
14 LOCKE STREET
WINCHESTER, MA 01890

Prop ID: 55.B-1-212
Prop Location: 993 MASS AVE UNIT 212 Arlington, MA
Owner: O'BRIEN MICHAEL
Co-Owner: SHEN QIANRU
Mailing Address:
993 MASS AVE UNIT 212
ARLINGTON, MA 02476

Prop ID: 55.B-1-213
Prop Location: 993 MASS AVE UNIT 213 Arlington, MA
Owner: CHEN QIAN
Co-Owner:
Mailing Address:
993 MASS AVENUE #213
ARLINGTON, MA 02476

Prop ID: 55.B-1-214
Prop Location: 993 MASS AVE UNIT 214 Arlington, MA
Owner: YOUNG WILLIAM F/TRUSTEE
Co-Owner: WILLIAM YOUNG JR TRUST
Mailing Address:
PO BOX 327 DEPT 16
HOUSTON, TX 77001

Prop ID: 55.B-1-215
Prop Location: 993 MASS AVE UNIT 215 Arlington, MA
Owner: KARAASLANIAN JACQUELINE
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 215
ARLINGTON, MA 02476

Prop ID: 55.B-1-216
Prop Location: 993 MASS AVE UNIT 216 Arlington, MA
Owner: PAUL DAVID S
Co-Owner:
Mailing Address:
993 MASS AVE #216
ARLINGTON, MA 02476

Prop ID: 55.B-1-217
Prop Location: 993 MASS AVE UNIT 217 Arlington, MA
Owner: HEALEY MARGARET L
Co-Owner:
Mailing Address:
993 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55.B-1-218
Prop Location: 993 MASS AVE UNIT 218 Arlington, MA
Owner: PINE DANIEL R
Co-Owner:
Mailing Address:
51 STOWECROFT ROAD
ARLINGTON, MA 02476

Prop ID: 55.B-1-219
Prop Location: 993 MASS AVE UNIT 219 Arlington, MA
Owner: RASOGIANNI PANAGIOTA
Co-Owner:
Mailing Address:
993 MASS AVENUE #219
ARLINGTON, MA 02476

Prop ID: 55.B-1-220
Prop Location: 993 MASS AVE UNIT 220 Arlington, MA
Owner: BOWLER ELIZABETH M
Co-Owner:
Mailing Address:
993 MASS AVENUE #220
ARLINGTON, MA 02476

Prop ID: 55.B-1-221
Prop Location: 993 MASS AVE UNIT 221 Arlington, MA
Owner: GUTHRIE LINDA
Co-Owner:
Mailing Address:
993 MASS AVE #221
ARLINGTON, MA 02476

Prop ID: 55.B-1-222
Prop Location: 993 MASS AVE UNIT 222 Arlington, MA
Owner: BHANDARI MANISH
Co-Owner: BORAR SALONI
Mailing Address:
993 MASSACHUSETTS AVE
UNIT 222
ARLINGTON, MA 02476

Prop ID: 55.B-1-223
Prop Location: 993 MASS AVE UNIT 223 Arlington, MA
Owner: SIRACUSA JAMES M JR
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 223
ARLINGTON, MA 02476

Prop ID: 55.B-1-224
Prop Location: 993 MASS AVE UNIT 224 Arlington, MA
Owner: GOULD MARGARET M--ETAL
Co-Owner: GOULD PATRICK A
Mailing Address:
91-1511 KAIKOHOLA ST
EWA BEACH, HI 96706

Prop ID: 55.B-1-225
Prop Location: 993 MASS AVE UNIT 225 Arlington, MA
Owner: BURKE SARA
Co-Owner:
Mailing Address:
993 MASS AVE #225
ARLINGTON, MA 02476

Prop ID: 55.B-1-226
Prop Location: 993 MASS AVE UNIT 226 Arlington, MA
Owner: ORIA MYRA
Co-Owner:
Mailing Address:
993 MASS AVE #226
ARLINGTON, MA 02476

Prop ID: 55.B-1-227
Prop Location: 993 MASS AVE UNIT 227 Arlington, MA
Owner: ZHOU CHANGHAO
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE #227
ARLINGTON, MA 02476

Prop ID: 55.B-1-228
Prop Location: 993 MASS AVE UNIT 228 Arlington, MA
Owner: MARTIN ROBERT J & KATHRYN S/ TRS
Co-Owner: 993 MASSACHUSETTS AVENUE UNIT
Mailing Address:
993 MASS AVE UNIT 228
ARLINGTON, MA 02476

Prop ID: 55.B-1-301
Prop Location: 993 MASS AVE UNIT 301 Arlington, MA
Owner: MATTESON MARY BLISS
Co-Owner:
Mailing Address:
993 MASS AVE #301
ARLINGTON, MA 02476

Prop ID: 55.B-1-302
Prop Location: 993 MASS AVE UNIT 302 Arlington, MA
Owner: ZHU HUOHUI
Co-Owner: JI YANMIN
Mailing Address:
20 HAWTHORNE AVENUE
ARLINGTON, MA 02476

Prop ID: 55.B-1-303
Prop Location: 993 MASS AVE UNIT 303 Arlington, MA
Owner: NAJAFABADI MALIHE AHMADI
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 303
ARLINGTON, MA 02476

Prop ID: 55.B-1-304
Prop Location: 993 MASS AVE UNIT 304 Arlington, MA
Owner: MICKEVICH ANNA
Co-Owner:
Mailing Address:
993 MASS AVE #304
ARLINGTON, MA 02476

Prop ID: 55.B-1-305
Prop Location: 993 MASS AVE UNIT 305 Arlington, MA
Owner: BHATTACHAN JONU &
Co-Owner: TULACHAN ANUP
Mailing Address:
993 MASS AVE UNIT 305
ARLINGTON, MA 02474

Prop ID: 55.B-1-306
Prop Location: 993 MASS AVE UNIT 306 Arlington, MA
Owner: HARVEY THOMAS M
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 306
ARLINGTON, MA 02476

Prop ID: 55.B-1-307
Prop Location: 993 MASS AVE UNIT 307 Arlington, MA
Owner: AGHDAMLIAN ANTRANIK S/ TTE
Co-Owner: AGHDAMLIAN FAMILY TRUST
Mailing Address:
993 MASS AVENUE #307
ARLINGTON, MA 02476

Prop ID: 55.B-1-308
Prop Location: 993 MASS AVE UNIT 308 Arlington, MA
Owner: CHEAH JENYENG & SUSAN &
Co-Owner: LIANG WENKWAY
Mailing Address:
993 MASS AVENUE #308
ARLINGTON, MA 02476

Prop ID: 55.B-1-309
Prop Location: 993 MASS AVE UNIT 309 Arlington, MA
Owner: CHAN AMY
Co-Owner:
Mailing Address:
165 PHILIPS BROOKS RD
WESTWOOD, MA 02090

Prop ID: 55.B-1-310
Prop Location: 993 MASS AVE UNIT 310 Arlington, MA
Owner: SHEN GRACE/ LIFE ESTATE
Co-Owner:
Mailing Address:
59 SCITUATE ST
ARLINGTON, MA 02476

Prop ID: 55.B-1-311
Prop Location: 993 MASS AVE UNIT 311 Arlington, MA
Owner: RODRIGUEZ JACQUELINE F
Co-Owner:
Mailing Address:
993 MASS AVENUE #311
ARLINGTON, MA 02476

Prop ID: 55.B-1-312
Prop Location: 993 MASS AVE UNIT 312 Arlington, MA
Owner: CHAVES ANTONIO F & MARIA M
Co-Owner: TTEES/ CHAVES REVOCABLE TR
Mailing Address:
434 APPLETON STREET
ARLINGTON, MA 02476

Prop ID: 55.B-1-313
Prop Location: 993 MASS AVE UNIT 313 Arlington, MA
Owner: GARCIA FRANCISCO--ETAL
Co-Owner: GARCIA CORALIA M
Mailing Address:
5 COPPERSMITH WAY
LEXINGTON, MA 02476

Prop ID: 55.B-1-314
Prop Location: 993 MASS AVE UNIT 314 Arlington, MA
Owner: GUAN CHENGHE
Co-Owner: ZHANG JING
Mailing Address:
993 MASS AVE #314
ARLINGTON, MA 02476

Prop ID: 55.B-2-101
Prop Location: 995 MASS AVE UNIT 101 Arlington, MA
Owner: BARNES ANGELA/ETAL
Co-Owner: FITTANTE MICHAEL
Mailing Address:
5956 FAIRVIEW WOODS DR
FAIRFAX STATION, VA 22039

Prop ID: 55.B-2-102
Prop Location: 995 MASS AVE UNIT 102 Arlington, MA
Owner: GHELICHI RAMIN
Co-Owner: GHELICHI JESSICA JUNE
Mailing Address:
72 MT VERNON ST
ARLINGTON, MA 02476

Prop ID: 55.B-2-103
Prop Location: 995 MASS AVE UNIT 103 Arlington, MA
Owner: TEEHAN EDWARD R JR &
Co-Owner: TEEHAN MARGARET M
Mailing Address:
995 MASS AVENUE #103
ARLINGTON, MA 02476

Prop ID: 55.B-2-104
Prop Location: 995 MASS AVE UNIT 104 Arlington, MA
Owner: CORRICELLI DAVID
Co-Owner:
Mailing Address:
995 MASS AVENUE #104
ARLINGTON, MA 02476

Prop ID: 55.B-2-105
Prop Location: 995 MASS AVE UNIT 105 Arlington, MA
Owner: PASQUALE FRANCO
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 105
ARLINGTON, MA 02476

Prop ID: 55.B-2-106
Prop Location: 995 MASS AVE UNIT 106 Arlington, MA
Owner: LERNER DEVON A
Co-Owner:
Mailing Address:
48 FLORENCE AVENUE
UNIT 2
ARLINGTON, MA 02476

Prop ID: 55.B-2-201
Prop Location: 995 MASS AVE UNIT 201 Arlington, MA
Owner: ZAVARO GEORGE
Co-Owner: ZAVARO NAHREIN
Mailing Address:
60 BRIGHTON ST
BELMONT, MA 02478

Prop ID: 55.B-2-202
Prop Location: 995 MASS AVE UNIT 202 Arlington, MA
Owner: CHAN SAU KING
Co-Owner: LEUNG KENNETH G
Mailing Address:
12 RIDGE ST
WINCHESTER, MA 01890

Prop ID: 55.B-2-203
Prop Location: 995 MASS AVE UNIT 203 Arlington, MA
Owner: CHIVUKULA SRINIVAS & SUSMITHA
Co-Owner:
Mailing Address:
8 HERON CIR UNIT 8
WALPOLE, MA 02081

Prop ID: 55.B-2-204
Prop Location: 995 MASS AVE UNIT 204 Arlington, MA
Owner: MACDONALD SHARON
Co-Owner:
Mailing Address:
995 MASS AVENUE #204
ARLINGTON, MA 02476

Prop ID: 55.B-2-205
Prop Location: 995 MASS AVE UNIT 205 Arlington, MA
Owner: GALLAGHER JASON E
Co-Owner:
Mailing Address:
995 MASSACHUSETTS AVE
UNIT 205
ARLINGTON, MA 02476

Prop ID: 55.B-2-206
Prop Location: 995 MASS AVE UNIT 206 Arlington, MA
Owner: LAN TAO/CHEN KEXI
Co-Owner:
Mailing Address:
18 BROWNE ST
#2
BROOKLINE, MA 02446

Prop ID: 55.B-2-301
Prop Location: 995 MASS AVE UNIT 301 Arlington, MA
Owner: SU CLEMENT C
Co-Owner: WONG WENDY R
Mailing Address:
1 NASSAU ST
UNIT 1205
BOSTON, MA 02111

Prop ID: 55.B-2-302
Prop Location: 995 MASS AVE UNIT 302 Arlington, MA
Owner: SOUZA PEGGY A/ TRUSTEE
Co-Owner: BLAIR MICHAEL WARD SUPPLEMENTA
Mailing Address:
204 OSCEOLA RD
BELLEAIR, FL 33756

Prop ID: 55.B-2-303
Prop Location: 995 MASS AVE UNIT 303 Arlington, MA
Owner: MCCAULEY JAMES & BARBARA
Co-Owner:
Mailing Address:
1184 MASSACHUSETTS AVE
ARLINGTON, MA 02476

Prop ID: 55.B-2-304
Prop Location: 995 MASS AVE UNIT 304 Arlington, MA
Owner: CLEVELAND THOMAS /TRUSTEE
Co-Owner: SANDRA CLEVELAND TRUST
Mailing Address:
EDINBURG CENTER/SANDRA CLEVELAND
205 BURLINGTON RD
BEDFORD, MA 01730

Prop ID: 55.B-2-305
Prop Location: 995 MASS AVE UNIT 305 Arlington, MA
Owner: BIRD CHRISTINE W
Co-Owner:
Mailing Address:
995 MASS AVE #305
ARLINGTON, MA 02476

Prop ID: 55.B-2-306
Prop Location: 995 MASS AVE UNIT 306 Arlington, MA
Owner: LEUNG YUK KWAI/ TRUSTEE
Co-Owner: YUK KWAI LEUNG TRUST UDT
Mailing Address:
801 FRANKLIN ST #715
OAKLAND, CA 94607

Prop ID: 55.B-2-401
Prop Location: 995 MASS AVE UNIT 401 Arlington, MA
Owner: BLOOMQUIST ALAN
Co-Owner:
Mailing Address:
88 APPLETON STREET
QUINCY, MA 02171

Prop ID: 55.B-2-402
Prop Location: 995 MASS AVE UNIT 402 Arlington, MA
Owner: KREIFELDT ALEXANDER G
Co-Owner:
Mailing Address:
995 MASS AVE #402
ARLINGTON, MA 02476

Prop ID: 55.B-2-403
Prop Location: 995 MASS AVE UNIT 403 Arlington, MA
Owner: BARRETT JOHN A
Co-Owner:
Mailing Address:
995 MASS AVENUE #403
ARLINGTON, MA 02476

Prop ID: 55.B-2-404
Prop Location: 995 MASS AVE UNIT 404 Arlington, MA
Owner: SHINE GAETANA/MICHAEL
Co-Owner:
Mailing Address:
995 MASS AVE #404
ARLINGTON, MA 02476

Prop ID: 55.B-2-405
Prop Location: 995 MASS AVE UNIT 405 Arlington, MA
Owner: QUI GEPING
Co-Owner:
Mailing Address:
6 NASSAU DR
WINCHESTER, MA 01890

Prop ID: 55.B-2-406
Prop Location: 995 MASS AVE UNIT 406 Arlington, MA
Owner: BOYCE SUZANNE E
Co-Owner:
Mailing Address:
2700 ASHLAND AVE UNIT 21
CINCINNATI, OH 45206-1399

Prop ID: 55.B-2-501
Prop Location: 995 MASS AVE UNIT 501 Arlington, MA
Owner: GRUBEL JOANNA
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 501
ARLINGTON, MA 02474

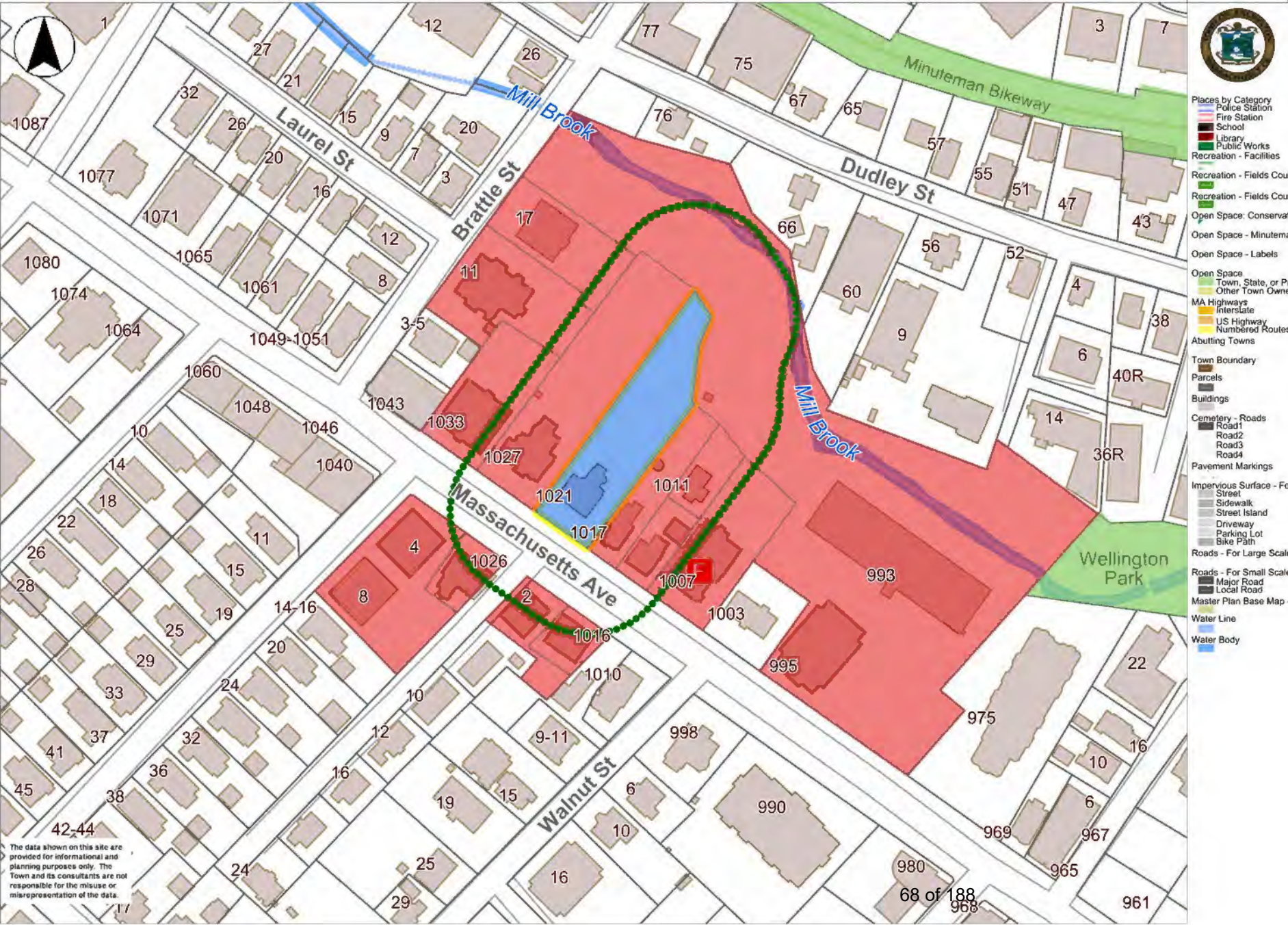
Prop ID: 55.B-2-502
Prop Location: 995 MASS AVE UNIT 502 Arlington, MA
Owner: WEISS JOHN E & EMILY S
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 502
ARLINGTON, MA 02476

Prop ID: 55.B-2-503
Prop Location: 995 MASS AVE UNIT 503 Arlington, MA
Owner: ROPI ELAINE
Co-Owner:
Mailing Address:
995 MASS AVENUE #503
ARLINGTON, MA 02476

Prop ID: 55.B-2-504
Prop Location: 995 MASS AVE UNIT 504 Arlington, MA
Owner: CARLINO JANET
Co-Owner:
Mailing Address:
995 MASS AVENUE #504
ARLINGTON, MA 02476

Prop ID: 55.B-2-505
Prop Location: 995 MASS AVE UNIT 505 Arlington, MA
Owner: LIANG RUITING &
Co-Owner: QIAO JING
Mailing Address:
995 MASS AVE #505
ARLINGTON, MA 02476

Prop ID: 55.B-2-506
Prop Location: 995 MASS AVE UNIT 506 Arlington, MA
Owner: MASTROCOLA DAVID/TRUSTEE
Co-Owner: MARY KATHRYN MASTROCOLA 2016
Mailing Address:
995 MASS AVE UNIT #506
ARLINGTON, MA 02476





Office of the
Board of Assessors
Robbins Memorial Town Hall
Arlington, MA 02476
(781) 316-3050
Assessors@town.arlington.ma.us

Abutters List

Date: December 13, 2021

Subject Property Address: 1025-1027 MASS AVE Arlington, MA
Subject Property ID: 55-2-20

Search Distance: 100 Feet
CONSERVATION

The Board of Assessors certifies the names and addresses of requested parties in interest, all abutters within 100 feet of the property lines, of subject property.

A handwritten signature in black ink, which appears to read "Robert E. Greeley". The signature is written in a cursive style and is positioned above a horizontal line.

Board of Assessors

Abutters List

Date: December 13, 2021

Subject Property Address: 1025-1027 MASS AVE Arlington,
MA
Subject Property ID: 55-2-20

Search Distance: 100 Feet
Conservation

Prop ID: 128-3-30.A
Prop Location: 4-8 MENOTOMY RD Arlington, MA
Owner: SULLIVAN WILLIAM H TRS-ETAL
Co-Owner: M/T EMERALD ASSOCIATES
Mailing Address:
P.O. BOX 15
CARLISLE, MA 01741

Prop ID: 128-3-31.A
Prop Location: 1026 MASS AVE Arlington, MA
Owner: JOHNSON REALTY INC
Co-Owner:
Mailing Address:
1026 MASS AVE SUITE 1
ARLINGTON, MA 02476

Prop ID: 128-3-6.B
Prop Location: 2 ORCHARD PL Arlington, MA
Owner: HOUSING CORP OF ARLINGTON
Co-Owner:
Mailing Address:
252 MASS AVE
ARLINGTON, MA 02474

Prop ID: 55-2-18
Prop Location: 1017 MASS AVE Arlington, MA
Owner: ERCOLINI MICHAEL
Co-Owner:
Mailing Address:
1017 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-19
Prop Location: 1021 MASS AVE Arlington, MA
Owner: 1021 MASSACHUSETTS AVENUE LLC
Co-Owner:
Mailing Address:
1021 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-20
Prop Location: 1025-1027 MASS AVE Arlington, MA
Owner: NYBERG JONATHAN M
Co-Owner: DOLAN SARA Q
Mailing Address:
PO BOX 292
ARLINGTON, MA 02476

Prop ID: 55-2-21
Prop Location: 1033 MASS AVE Arlington, MA
Owner: 1033 MASS AVE ARLINGTON LLC
Co-Owner:
Mailing Address:
7 CENTRAL ST SUITE 120
ARLINGTON, MA 02476

Prop ID: 55-2-22
Prop Location: 1035-1043 MASS AVE Arlington, MA
Owner: TDR REAL ESTATE MANAGEMENT LLC
Co-Owner:
Mailing Address:
1043 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55-2-24
Prop Location: 11 BRATTLE ST Arlington, MA
Owner: JOHNSTON LEROY N JR
Co-Owner: JOHNSTON CYNTHIA A
Mailing Address:
58 RICHFIELD RD
ARLINGTON, MA 02474

Prop ID: 55-2-25
Prop Location: 17 BRATTLE ST Arlington, MA
Owner: JOHNSON JUDITH N
Co-Owner:
Mailing Address:
1090 NORTH ROAD
CARISLE, MA 01741

Prop ID: 55.A-2-3
Prop Location: 3 BRATTLE ST Arlington, MA
Owner: COPE JOSHUA D &
Co-Owner: WONG SHE MING
Mailing Address:
3 BRATTLE STREET
ARLINGTON, MA 02476

Prop ID: 55.A-2-5
Prop Location: 5 BRATTLE ST Arlington, MA
Owner: BURTCH MICHAEL F &
Co-Owner: YARBROUGH MELANIE
Mailing Address:
5 BRATTLE STREET
ARLINGTON, MA 02476

Prop ID: 55.B-1-101
Prop Location: 993 MASS AVE UNIT 101 Arlington, MA
Owner: BUCHANAN ELAINE M
Co-Owner:
Mailing Address:
76 BEECH ST UNIT 2
BELMONT, MA 02478

Prop ID: 55.B-1-102
Prop Location: 993 MASS AVE UNIT 102 Arlington, MA
Owner: LIN JANE E
Co-Owner: LEE KEN A
Mailing Address:
993 MASS AVENUE #102
ARLINGTON, MA 02476

Prop ID: 55.B-1-103
Prop Location: 993 MASS AVE UNIT 103 Arlington, MA
Owner: MC KINNON GARRETT
Co-Owner:
Mailing Address:
239 PLEASANT STREET
ARLINGTON, MA 02476

Prop ID: 55.B-1-104
Prop Location: 993 MASS AVE UNIT 104 Arlington, MA
Owner: FABIANO DIANE M
Co-Owner:
Mailing Address:
993 MASS AVE #104
ARLINGTON, MA 02474

Prop ID: 55.B-1-105
Prop Location: 993 MASS AVE UNIT 105 Arlington, MA
Owner: URBAN JULIE A/ TRUSTEE
Co-Owner: JULIE A URBAN REVOCABLE LIVING
Mailing Address:
993 MASS AVE #105
ARLINGTON, MA 02476

Prop ID: 55.B-1-106
Prop Location: 993 MASS AVE UNIT 106 Arlington, MA
Owner: BOWES ROBERT E & ELAINE M/ TRS
Co-Owner: ROBERT E BOWES TRUST
Mailing Address:
26 LAKEVIEW
ARLINGTON, MA 02476

Prop ID: 55.B-1-107
Prop Location: 993 MASS AVE UNIT 107 Arlington, MA
Owner: SHANNON VIRGINIA A LIFE ESTATE
Co-Owner:
Mailing Address:
993 MASS AVENUE #107
ARLINGTON, MA 02476

Prop ID: 55.B-1-108
Prop Location: 993 MASS AVE UNIT 108 Arlington, MA
Owner: HART ASHLEY
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE
UNIT 108
ARLINGTON, MA 02476

Prop ID: 55.B-1-109
Prop Location: 993 MASS AVE UNIT 109 Arlington, MA
Owner: LENNEY CHRISTOPHER
Co-Owner:
Mailing Address:
993 MASS AVENUE #109
ARLINGTON, MA 02476

Prop ID: 55.B-1-110
Prop Location: 993 MASS AVE UNIT 110 Arlington, MA
Owner: REED MARY ELLEN
Co-Owner:
Mailing Address:
993 MASS AVE #110
ARLINGTON, MA 02476

Prop ID: 55.B-1-111
Prop Location: 993 MASS AVE UNIT 111 Arlington, MA
Owner: OSHEA EILEEN
Co-Owner:
Mailing Address:
993 MASS AVE #111
ARLINGTON, MA 02476

Prop ID: 55.B-1-112
Prop Location: 993 MASS AVE UNIT 112 Arlington, MA
Owner: LIN CHUAN
Co-Owner: CAO HUAIGU
Mailing Address:
993 MASS AVENUE #112
ARLINGTON, MA 02476

Prop ID: 55.B-1-113
Prop Location: 993 MASS AVE UNIT 113 Arlington, MA
Owner: SHEEHAN MEAGHAN
Co-Owner:
Mailing Address:
581 OLD STRAWBERRY HILL RD
CENTERVILLE MA, MA 02632

Prop ID: 55.B-1-114
Prop Location: 993 MASS AVE UNIT 114 Arlington, MA
Owner: IKEMOTO BRIAN Y
Co-Owner:
Mailing Address:
40 GILMAN ST
SOMERVILLE, MA 02145

Prop ID: 55.B-1-115
Prop Location: 993 MASS AVE UNIT 115 Arlington, MA
Owner: CLERMONT JACQUELYN M
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE #115
ARLINGTON, MA 02476

Prop ID: 55.B-1-117
Prop Location: 993 MASS AVE UNIT 117 Arlington, MA
Owner: CHYI SHYUE-LING
Co-Owner:
Mailing Address:
993 MASS AVENUE #117
ARLINGTON, MA 02476

Prop ID: 55.B-1-118
Prop Location: 993 MASS AVE UNIT 118 Arlington, MA
Owner: WONG ELIZABETH & MAYWOOD
Co-Owner: MARTIN PATRICIA
Mailing Address:
993 MASS AVENUE UNIT 118
ARLINGTON, MA 02476

Prop ID: 55.B-1-119
Prop Location: 993 MASS AVE UNIT 119 Arlington, MA
Owner: KUNSMAN JANET M
Co-Owner:
Mailing Address:
134 WOODSIDE LANE
ARLINGTON, MA 02474

Prop ID: 55.B-1-120
Prop Location: 993 MASS AVE UNIT 120 Arlington, MA
Owner: BAGHDADI REZA
Co-Owner: SOLOUKI SAEIDEH
Mailing Address:
993 MASS AVE #201
ARLINGTON, MA 02476

Prop ID: 55.B-1-121
Prop Location: 993 MASS AVE UNIT 121 Arlington, MA
Owner: PANTAZOPOULOS NICHOLAS
Co-Owner:
Mailing Address:
993 MASS AVE #121
ARLINGTON, MA 02476

Prop ID: 55.B-1-122
Prop Location: 993 MASS AVE UNIT 122 Arlington, MA
Owner: LIVINGSTONE DAVID J
Co-Owner:
Mailing Address:
993 MASS AVENUE #122
ARLINGTON, MA 02476

Prop ID: 55.B-1-123
Prop Location: 993 MASS AVE UNIT 123 Arlington, MA
Owner: ARLINGTON HOUSING AUTHORITY
Co-Owner:
Mailing Address:
4 WINSLOW ST
ARLINGTON, MA 02476

Prop ID: 55.B-1-124
Prop Location: 993 MASS AVE UNIT 124 Arlington, MA
Owner: WILEY JUSTIN
Co-Owner:
Mailing Address:
993 MASS AVE #124
ARLINGTON, MA 02476

Prop ID: 55.B-1-125
Prop Location: 993 MASS AVE UNIT 125 Arlington, MA
Owner: CLABAUGH JERRY A
Co-Owner:
Mailing Address:
993 MASS AVENUE #125
ARLINGTON, MA 02476

Prop ID: 55.B-1-126
Prop Location: 993 MASS AVE UNIT 126 Arlington, MA
Owner: EISENHART HENRY
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 126
ARLINGTON, MA 02476

Prop ID: 55.B-1-127
Prop Location: 993 MASS AVE UNIT 127 Arlington, MA
Owner: PASQUALE FRANCO
Co-Owner:
Mailing Address:
993 MASS AVE #127
ARLINGTON, MA 02474

Prop ID: 55.B-1-128
Prop Location: 993 MASS AVE UNIT 128 Arlington, MA
Owner: LAM VINCENT
Co-Owner: ZHAO YAN
Mailing Address:
993 MASS AVE UNIT 128
ARLINGTON, MA 02476

Prop ID: 55.B-1-201
Prop Location: 993 MASS AVE UNIT 201 Arlington, MA
Owner: BAGHDADI REZA
Co-Owner: SOLOUKI SAEIDEH
Mailing Address:
993 MASS AVE #201
ARLINGTON, MA 02476

Prop ID: 55.B-1-202
Prop Location: 993 MASS AVE UNIT 202 Arlington, MA
Owner: PARATORE JOSEPHINE
Co-Owner:
Mailing Address:
28 CROSS STREET
BELMONT, MA 02478

Prop ID: 55.B-1-203
Prop Location: 993 MASS AVE UNIT 203 Arlington, MA
Owner: DANALEVICH JENNIFER
Co-Owner:
Mailing Address:
1 CONN ST #3
WOBURN, MA 01801

Prop ID: 55.B-1-204
Prop Location: 993 MASS AVE UNIT 204 Arlington, MA
Owner: ILIC KATARINA
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 204
ARLINGTON, MA 02476

Prop ID: 55.B-1-205
Prop Location: 993 MASS AVE UNIT 205 Arlington, MA
Owner: GUO FEIFEI
Co-Owner:
Mailing Address:
993 MASS AVE #205
ARLINGTON, MA 02474

Prop ID: 55.B-1-206
Prop Location: 993 MASS AVE UNIT 206 Arlington, MA
Owner: KAHN ELIZABETH/ TRUSTEE
Co-Owner: BURKE REALTY TRUST
Mailing Address:
2424 EUCLID ST
SANTA MONICA, CA 90405

Prop ID: 55.B-1-207
Prop Location: 993 MASS AVE UNIT 207 Arlington, MA
Owner: ILIC KATARINA
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 204
ARLINGTON, MA 02476

Prop ID: 55.B-1-208
Prop Location: 993 MASS AVE UNIT 208 Arlington, MA
Owner: FLANIGAN ELAINE & JAMES/ TRS
Co-Owner: JAMES M FLANIGAN TRUST
Mailing Address:
190 BARLEY NECK ROAD
ORLEANS, MA 02653

Prop ID: 55.B-1-209
Prop Location: 993 MASS AVE UNIT 209 Arlington, MA
Owner: HORAN MATTHEW R
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 209
ARLINGTON, MA 02474

Prop ID: 55.B-1-210
Prop Location: 993 MASS AVE UNIT 210 Arlington, MA
Owner: DALLAS ANN F
Co-Owner:
Mailing Address:
993 MASS AVE #210
ARLINGTON, MA 02476

Prop ID: 55.B-1-211
Prop Location: 993 MASS AVE UNIT 211 Arlington, MA
Owner: DILEO HEIDI R RUTSTEIN
Co-Owner:
Mailing Address:
14 LOCKE STREET
WINCHESTER, MA 01890

Prop ID: 55.B-1-212
Prop Location: 993 MASS AVE UNIT 212 Arlington, MA
Owner: O`BRIEN MICHAEL
Co-Owner: SHEN QIANRU
Mailing Address:
993 MASS AVE UNIT 212
ARLINGTON, MA 02476

Prop ID: 55.B-1-213
Prop Location: 993 MASS AVE UNIT 213 Arlington, MA
Owner: CHEN QIAN
Co-Owner:
Mailing Address:
993 MASS AVENUE #213
ARLINGTON, MA 02476

Prop ID: 55.B-1-214
Prop Location: 993 MASS AVE UNIT 214 Arlington, MA
Owner: YOUNG WILLIAM F/TRUSTEE
Co-Owner: WILLIAM YOUNG JR TRUST
Mailing Address:
PO BOX 327 DEPT 16
HOUSTON, TX 77001

Prop ID: 55.B-1-215
Prop Location: 993 MASS AVE UNIT 215 Arlington, MA
Owner: KARAASLANIAN JACQUELINE
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 215
ARLINGTON, MA 02476

Prop ID: 55.B-1-216
Prop Location: 993 MASS AVE UNIT 216 Arlington, MA
Owner: PAUL DAVID S
Co-Owner:
Mailing Address:
993 MASS AVE #216
ARLINGTON, MA 02476

Prop ID: 55.B-1-217
Prop Location: 993 MASS AVE UNIT 217 Arlington, MA
Owner: HEALEY MARGARET L
Co-Owner:
Mailing Address:
993 MASS AVE
ARLINGTON, MA 02476

Prop ID: 55.B-1-218
Prop Location: 993 MASS AVE UNIT 218 Arlington, MA
Owner: PINE DANIEL R
Co-Owner:
Mailing Address:
51 STOWECROFT ROAD
ARLINGTON, MA 02476

Prop ID: 55.B-1-219
Prop Location: 993 MASS AVE UNIT 219 Arlington, MA
Owner: RASOGIANNI PANAGIOTA
Co-Owner:
Mailing Address:
993 MASS AVENUE #219
ARLINGTON, MA 02476

Prop ID: 55.B-1-220
Prop Location: 993 MASS AVE UNIT 220 Arlington, MA
Owner: BOWLER ELIZABETH M
Co-Owner:
Mailing Address:
993 MASS AVENUE #220
ARLINGTON, MA 02476

Prop ID: 55.B-1-221
Prop Location: 993 MASS AVE UNIT 221 Arlington, MA
Owner: GUTHRIE LINDA
Co-Owner:
Mailing Address:
993 MASS AVE #221
ARLINGTON, MA 02476

Prop ID: 55.B-1-222
Prop Location: 993 MASS AVE UNIT 222 Arlington, MA
Owner: BHANDARI MANISH
Co-Owner: BORAR SALONI
Mailing Address:
993 MASSACHUSETTS AVE
UNIT 222
ARLINGTON, MA 02476

Prop ID: 55.B-1-223
Prop Location: 993 MASS AVE UNIT 223 Arlington, MA
Owner: SIRACUSA JAMES M JR
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 223
ARLINGTON, MA 02476

Prop ID: 55.B-1-224
Prop Location: 993 MASS AVE UNIT 224 Arlington, MA
Owner: GOULD MARGARET M--ETAL
Co-Owner: GOULD PATRICK A
Mailing Address:
91-1511 KAIKOHOLA ST
EWA BEACH, HI 96706

Prop ID: 55.B-1-225
Prop Location: 993 MASS AVE UNIT 225 Arlington, MA
Owner: BURKE SARA
Co-Owner:
Mailing Address:
993 MASS AVE #225
ARLINGTON, MA 02476

Prop ID: 55.B-1-226
Prop Location: 993 MASS AVE UNIT 226 Arlington, MA
Owner: ORIA MYRA
Co-Owner:
Mailing Address:
993 MASS AVE #226
ARLINGTON, MA 02476

Prop ID: 55.B-1-227
Prop Location: 993 MASS AVE UNIT 227 Arlington, MA
Owner: ZHOU CHANGHAO
Co-Owner:
Mailing Address:
993 MASSACHUSETTS AVE #227
ARLINGTON, MA 02476

Prop ID: 55.B-1-228
Prop Location: 993 MASS AVE UNIT 228 Arlington, MA
Owner: MARTIN ROBERT J & KATHRYN S/ TRS
Co-Owner: 993 MASSACHUSETTS AVENUE UNIT
Mailing Address:
993 MASS AVE UNIT 228
ARLINGTON, MA 02476

Prop ID: 55.B-1-301
Prop Location: 993 MASS AVE UNIT 301 Arlington, MA
Owner: MATTESON MARY BLISS
Co-Owner:
Mailing Address:
993 MASS AVE #301
ARLINGTON, MA 02476

Prop ID: 55.B-1-302
Prop Location: 993 MASS AVE UNIT 302 Arlington, MA
Owner: ZHU HUOHUI
Co-Owner: JI YANMIN
Mailing Address:
20 HAWTHORNE AVENUE
ARLINGTON, MA 02476

Prop ID: 55.B-1-303
Prop Location: 993 MASS AVE UNIT 303 Arlington, MA
Owner: NAJAFABADI MALIHE AHMADI
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 303
ARLINGTON, MA 02476

Prop ID: 55.B-1-304
Prop Location: 993 MASS AVE UNIT 304 Arlington, MA
Owner: MICKEVICH ANNA
Co-Owner:
Mailing Address:
993 MASS AVE #304
ARLINGTON, MA 02476

Prop ID: 55.B-1-305
Prop Location: 993 MASS AVE UNIT 305 Arlington, MA
Owner: BHATTACHAN JONU &
Co-Owner: TULACHAN ANUP
Mailing Address:
993 MASS AVE UNIT 305
ARLINGTON, MA 02474

Prop ID: 55.B-1-306
Prop Location: 993 MASS AVE UNIT 306 Arlington, MA
Owner: HARVEY THOMAS M
Co-Owner:
Mailing Address:
993 MASS AVE UNIT 306
ARLINGTON, MA 02476

Prop ID: 55.B-1-307
Prop Location: 993 MASS AVE UNIT 307 Arlington, MA
Owner: AGHDAMLIAN ANTRANIK S/ TTE
Co-Owner: AGHDAMLIAN FAMILY TRUST
Mailing Address:
993 MASS AVENUE #307
ARLINGTON, MA 02476

Prop ID: 55.B-1-308
Prop Location: 993 MASS AVE UNIT 308 Arlington, MA
Owner: CHEAH JENYENG & SUSAN &
Co-Owner: LIANG WENKWAY
Mailing Address:
993 MASS AVENUE #308
ARLINGTON, MA 02476

Prop ID: 55.B-1-309
Prop Location: 993 MASS AVE UNIT 309 Arlington, MA
Owner: CHAN AMY
Co-Owner:
Mailing Address:
165 PHILIPS BROOKS RD
WESTWOOD, MA 02090

Prop ID: 55.B-1-310
Prop Location: 993 MASS AVE UNIT 310 Arlington, MA
Owner: SHEN GRACE/ LIFE ESTATE
Co-Owner:
Mailing Address:
59 SCITUATE ST
ARLINGTON, MA 02476

Prop ID: 55.B-1-311
Prop Location: 993 MASS AVE UNIT 311 Arlington, MA
Owner: RODRIGUEZ JACQUELINE F
Co-Owner:
Mailing Address:
993 MASS AVENUE #311
ARLINGTON, MA 02476

Prop ID: 55.B-1-312
Prop Location: 993 MASS AVE UNIT 312 Arlington, MA
Owner: CHAVES ANTONIO F & MARIA M
Co-Owner: TTEES/ CHAVES REVOCABLE TR
Mailing Address:
434 APPLETON STREET
ARLINGTON, MA 02476

Prop ID: 55.B-1-313
Prop Location: 993 MASS AVE UNIT 313 Arlington, MA
Owner: GARCIA FRANCISCO--ETAL
Co-Owner: GARCIA CORALIA M
Mailing Address:
5 COPPERSMITH WAY
LEXINGTON, MA 02476

Prop ID: 55.B-1-314
Prop Location: 993 MASS AVE UNIT 314 Arlington, MA
Owner: GUAN CHENGHE
Co-Owner: ZHANG JING
Mailing Address:
993 MASS AVE #314
ARLINGTON, MA 02476

Prop ID: 55.B-2-101
Prop Location: 995 MASS AVE UNIT 101 Arlington, MA
Owner: BARNES ANGELA/ETAL
Co-Owner: FITTANTE MICHAEL
Mailing Address:
5956 FAIRVIEW WOODS DR
FAIRFAX STATION, VA 22039

Prop ID: 55.B-2-102
Prop Location: 995 MASS AVE UNIT 102 Arlington, MA
Owner: GHELICHI RAMIN
Co-Owner: GHELICHI JESSICA JUNE
Mailing Address:
72 MT VERNON ST
ARLINGTON, MA 02476

Prop ID: 55.B-2-103
Prop Location: 995 MASS AVE UNIT 103 Arlington, MA
Owner: TEEHAN EDWARD R JR &
Co-Owner: TEEHAN MARGARET M
Mailing Address:
995 MASS AVENUE #103
ARLINGTON, MA 02476

Prop ID: 55.B-2-104
Prop Location: 995 MASS AVE UNIT 104 Arlington, MA
Owner: CORRICELLI DAVID
Co-Owner:
Mailing Address:
995 MASS AVENUE #104
ARLINGTON, MA 02476

Prop ID: 55.B-2-105
Prop Location: 995 MASS AVE UNIT 105 Arlington, MA
Owner: PASQUALE FRANCO
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 105
ARLINGTON, MA 02476

Prop ID: 55.B-2-106
Prop Location: 995 MASS AVE UNIT 106 Arlington, MA
Owner: LERNER DEVON A
Co-Owner:
Mailing Address:
48 FLORENCE AVENUE
UNIT 2
ARLINGTON, MA 02476

Prop ID: 55.B-2-201
Prop Location: 995 MASS AVE UNIT 201 Arlington, MA
Owner: ZAVARO GEORGE
Co-Owner: ZAVARO NAHREIN
Mailing Address:
60 BRIGHTON ST
BELMONT, MA 02478

Prop ID: 55.B-2-202
Prop Location: 995 MASS AVE UNIT 202 Arlington, MA
Owner: CHAN SAU KING
Co-Owner: LEUNG KENNETH G
Mailing Address:
12 RIDGE ST
WINCHESTER, MA 01890

Prop ID: 55.B-2-203
Prop Location: 995 MASS AVE UNIT 203 Arlington, MA
Owner: CHIVUKULA SRINIVAS & SUSMITHA
Co-Owner:
Mailing Address:
8 HERON CIR UNIT 8
WALPOLE, MA 02081

Prop ID: 55.B-2-204
Prop Location: 995 MASS AVE UNIT 204 Arlington, MA
Owner: MACDONALD SHARON
Co-Owner:
Mailing Address:
995 MASS AVENUE #204
ARLINGTON, MA 02476

Prop ID: 55.B-2-205
Prop Location: 995 MASS AVE UNIT 205 Arlington, MA
Owner: GALLAGHER JASON E
Co-Owner:
Mailing Address:
995 MASSACHUSETTS AVE
UNIT 205
ARLINGTON, MA 02476

Prop ID: 55.B-2-206
Prop Location: 995 MASS AVE UNIT 206 Arlington, MA
Owner: LAN TAO/CHEN KEXI
Co-Owner:
Mailing Address:
18 BROWNE ST
#2
BROOKLINE, MA 02446

Prop ID: 55.B-2-301
Prop Location: 995 MASS AVE UNIT 301 Arlington, MA
Owner: SU CLEMENT C
Co-Owner: WONG WENDY R
Mailing Address:
1 NASSAU ST
UNIT 1205
BOSTON, MA 02111

Prop ID: 55.B-2-302
Prop Location: 995 MASS AVE UNIT 302 Arlington, MA
Owner: SOUZA PEGGY A/ TRUSTEE
Co-Owner: BLAIR MICHAEL WARD SUPPLEMENTA
Mailing Address:
204 OSCEOLA RD
BELLEAIR, FL 33756

Prop ID: 55.B-2-303
Prop Location: 995 MASS AVE UNIT 303 Arlington, MA
Owner: MCCAULEY JAMES & BARBARA
Co-Owner:
Mailing Address:
1184 MASSACHUSETTS AVE
ARLINGTON, MA 02476

Prop ID: 55.B-2-304
Prop Location: 995 MASS AVE UNIT 304 Arlington, MA
Owner: CLEVELAND THOMAS /TRUSTEE
Co-Owner: SANDRA CLEVELAND TRUST
Mailing Address:
EDINBURG CENTER/SANDRA CLEVELAND
205 BURLINGTON RD
BEDFORD, MA 01730

Prop ID: 55.B-2-305
Prop Location: 995 MASS AVE UNIT 305 Arlington, MA
Owner: BIRD CHRISTINE W
Co-Owner:
Mailing Address:
995 MASS AVE #305
ARLINGTON, MA 02476

Prop ID: 55.B-2-306
Prop Location: 995 MASS AVE UNIT 306 Arlington, MA
Owner: LEUNG YUK KWAI/ TRUSTEE
Co-Owner: YUK KWAI LEUNG TRUST UDT
Mailing Address:
801 FRANKLIN ST #715
OAKLAND, CA 94607

Prop ID: 55.B-2-401
Prop Location: 995 MASS AVE UNIT 401 Arlington, MA
Owner: BLOOMQUIST ALAN
Co-Owner:
Mailing Address:
88 APPLETON STREET
QUINCY, MA 02171

Prop ID: 55.B-2-402
Prop Location: 995 MASS AVE UNIT 402 Arlington, MA
Owner: KREIFELDT ALEXANDER G
Co-Owner:
Mailing Address:
995 MASS AVE #402
ARLINGTON, MA 02476

Prop ID: 55.B-2-403
Prop Location: 995 MASS AVE UNIT 403 Arlington, MA
Owner: BARRETT JOHN A
Co-Owner:
Mailing Address:
995 MASS AVENUE #403
ARLINGTON, MA 02476

Prop ID: 55.B-2-404
Prop Location: 995 MASS AVE UNIT 404 Arlington, MA
Owner: SHINE GAETANA/MICHAEL
Co-Owner:
Mailing Address:
995 MASS AVE #404
ARLINGTON, MA 02476

Prop ID: 55.B-2-405
Prop Location: 995 MASS AVE UNIT 405 Arlington, MA
Owner: QUI GEPING
Co-Owner:
Mailing Address:
6 NASSAU DR
WINCHESTER, MA 01890

Prop ID: 55.B-2-406
Prop Location: 995 MASS AVE UNIT 406 Arlington, MA
Owner: BOYCE SUZANNE E
Co-Owner:
Mailing Address:
2700 ASHLAND AVE UNIT 21
CINCINNATI, OH 45206-1399

Prop ID: 55.B-2-501
Prop Location: 995 MASS AVE UNIT 501 Arlington, MA
Owner: GRUBEL JOANNA
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 501
ARLINGTON, MA 02474

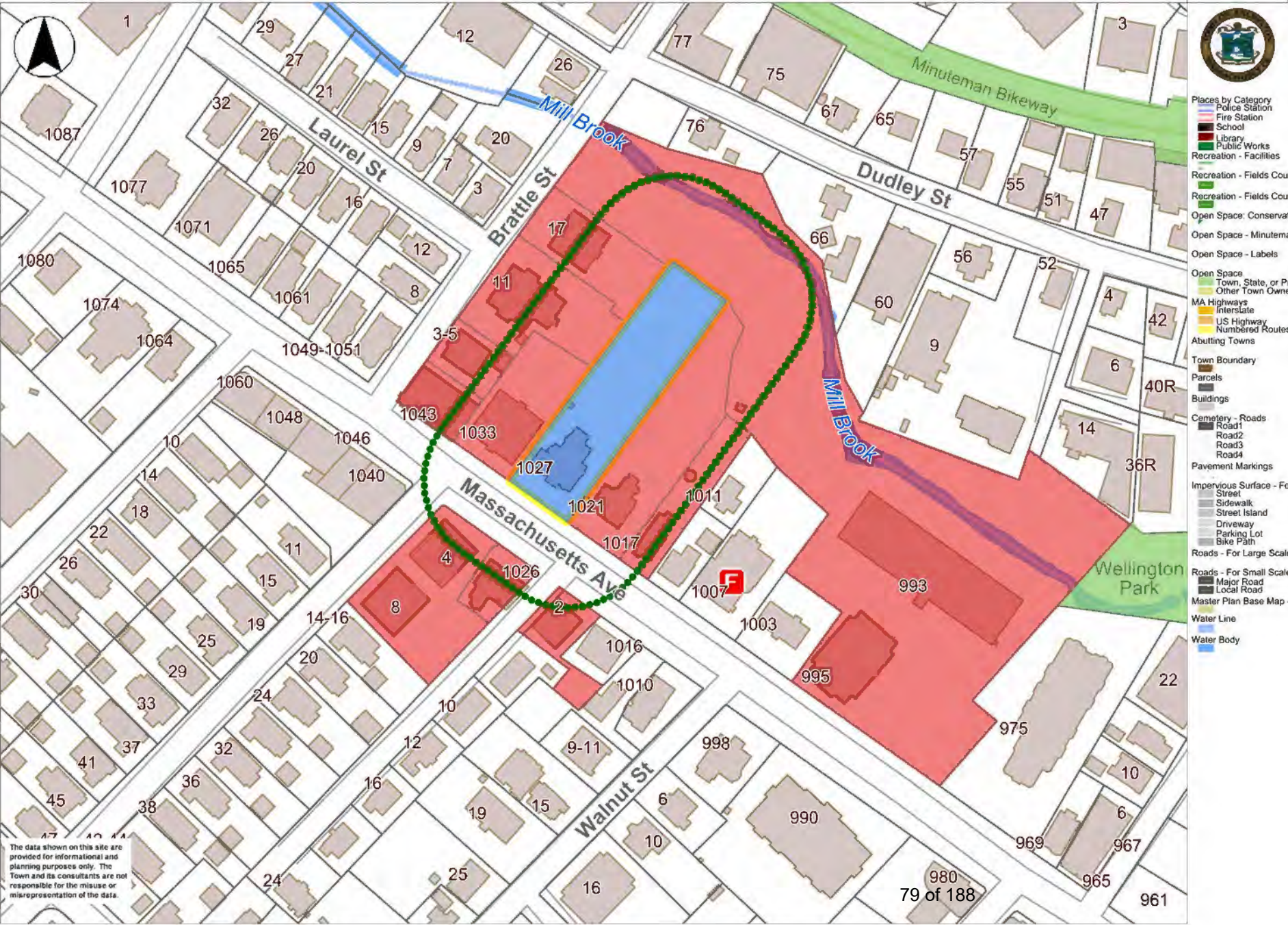
Prop ID: 55.B-2-502
Prop Location: 995 MASS AVE UNIT 502 Arlington, MA
Owner: WEISS JOHN E & EMILY S
Co-Owner:
Mailing Address:
995 MASS AVE UNIT 502
ARLINGTON, MA 02476

Prop ID: 55.B-2-503
Prop Location: 995 MASS AVE UNIT 503 Arlington, MA
Owner: ROPI ELAINE
Co-Owner:
Mailing Address:
995 MASS AVENUE #503
ARLINGTON, MA 02476

Prop ID: 55.B-2-504
Prop Location: 995 MASS AVE UNIT 504 Arlington, MA
Owner: CARLINO JANET
Co-Owner:
Mailing Address:
995 MASS AVENUE #504
ARLINGTON, MA 02476

Prop ID: 55.B-2-505
Prop Location: 995 MASS AVE UNIT 505 Arlington, MA
Owner: LIANG RUITING &
Co-Owner: QIAO JING
Mailing Address:
995 MASS AVE #505
ARLINGTON, MA 02476

Prop ID: 55.B-2-506
Prop Location: 995 MASS AVE UNIT 506 Arlington, MA
Owner: MASTROCOLA DAVID/TRUSTEE
Co-Owner: MARY KATHRYN MASTROCOLA 2016
Mailing Address:
995 MASS AVE UNIT #506
ARLINGTON, MA 02476



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Notice of Intent Application

1021 and 1025 Massachusetts Avenue
Assessor's Parcel IDs: 55-2-19 and 55-2-20
Arlington, Massachusetts

December 22, 2021

1. Introduction

On behalf of the Applicant, MAJ Investment, LLC (Matthew P. Maggiore, Contact), LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application with the Arlington Conservation Commission (Commission) to demolish two (2) structures and associated driveways, parking lots, and site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building (under Chapter 40B) with ground-level parking garage and retail space. Portions of the proposed project are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management, a meadow, and stormwater management are proposed.

This NOI Application is being filed under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*) and its implementing *Regulations* (310 CMR 10.00, the *Act Regulations*) only, as the Arlington Zoning Board of Appeals (ZBA) will administer the *Town of Arlington Wetlands Protection Bylaw* (Article 8, the *Bylaw*) and its implementing *Wetlands Protection Regulations* (March 1, 2018, the *Bylaw Regulations*) under the Comprehensive Permit process. The Applicant anticipates filing the Comprehensive Permit Application with the ZBA early in 2022; however, would like the opportunity for the Commission to review the project for compliance with the *Act* and *Act Regulations* and provide comments prior to the Comprehensive Permit Application process.

Patriot Engineering has prepared the enclosed *1021 & 1025 Massachusetts Avenue Notice of Intent Plan Set* dated December 9, 2021 showing the existing and proposed conditions (*Site Plans*, Appendix B), and the *Stormwater Report* also dated December 9, 2021 (Appendix C).

2. General Site Description

The 47,085± square foot property contains two lots located along the north side of Massachusetts Avenue, between Arlington Heights and the Arlington High School, and directly across from the Massachusetts Avenue intersection with Orchard Place. Commercial and residential development generally surround the property on all sides, with apartment/condominium buildings located east and west of the site along Massachusetts Avenue and Brattle Street.



Northerly views of 1021 (top) and 1025 (bottom) Massachusetts Avenue structures and associated parking lots



Westerly view of wooded upland within northern portion of site

The property contains two (2) 3-story, wood-framed structures situated along Massachusetts Avenue, both with paved driveways extending northerly from Massachusetts Avenue toward paved parking lots situated north of the site structures. Impervious walkways provide access to the front entrances, and lawn and landscaping generally surround the structures and pavement. Roughly the northern half of the property is undeveloped, containing a wooded upland located within the Riverfront Area to Mill Brook. Site topography descends northerly, with gently sloping topography extending through the northern and southern portions of the site, and a comparatively steep topographic slope bifurcating the property in an east-west direction.

The wooded upland is separated from Mill Brook by a parking lot associated with an adjacent apartment complex, and dominated by invasive/exotic plants, including a canopy of Norway maple (*Acer platanoides*), and an understory of sapling Norway maple, burning bush (*Euonymus alatus*), and tartarian honeysuckle



Easterly view of parking lot separating site from Mill Brook



Scattered trash and debris within wooded upland

(*Lonicera tartarica*). The groundcover contains dense patches of ivy (*Vinca* sp.) and scattered patches of garlic mustard (*Alliaria petiolata*). Scattered piles of landscape debris and trash occur throughout the woodland.

Utilizing a hand-held, Dutch-style soil auger, LEC inspected soil conditions within the wooded upland, and observed a 20+ inch thick, gravelly loamy sand fill layer (C Horizon) with a soil matrix color ranging between 10YR 2/2 and 3/3. No redoximorphic features or other indicators of hydrology were observed in the soil profile, and is not considered hydric according to the *Field Indicators for Identifying Hydric Soils in New England* (Version 4, April 2019, the *Field Indicators Guide*).

2.1

Natural Heritage and Endangered Species Program Designation

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021) published by the Natural Heritage & Endangered Species Program (NHESP), no areas of Estimated Habitats of Rare Wildlife or Priority Habitat of Rare Species, or Potential or Certified Vernal Pools exist on the site (Appendix A, Figure 3).

2.2

Floodplain Designation

According to the June 4, 2010 *Federal Emergency Management Agency Flood Insurance Rate Map* for Middlesex County, Massachusetts (Map No: 25017C0416E), the entire property is located within Zone X (not shaded): – *Areas determined to be outside the 1% Annual Chance Floodplain* (Appendix A, Figure 2). According to the FEMA FIRM,

Zone AE occurs north of the property adjacent to Mill Brook, roughly between elevations 73 and 74 (Datum: NAVD 88). The lowest elevation on the subject property is elevation 82 (NAVD 88), well above the Zone AE elevation. Accordingly, the site is not located within Bordering Land Subject to Flooding.

3. Wetland Resource Areas

LEC conducted a site evaluation on October 15, 2021 to identify and characterize existing protectable Wetland Resource Areas located on or immediately adjacent to the site, and to accompany the project surveyor to locate the Bank-Mean Annual High Water (MAHW) Line associated with Mill Brook. The extent of Wetland Resource Areas was determined through observations of existing plant communities and hydrologic indicators in accordance with the *Act*, its implementing *Regulations*, the *Bylaw*, and the *Bylaw Regulations*.

Based on these methods and review of pertinent maps, LEC determined that the Bank-MAHW Line to Mill Brook occurs north of the property, placing Riverfront Area on roughly the northern half of the property. No Bordering Vegetated Wetlands (BVW) were observed on or within 100 feet of the subject property.

3.1 Bank-Mean Annual High Water



Easterly view of Mill Brook north of the site

According to 310 CMR 10.58 (2) (a) 2., *Mean Annual High-water Line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to*

determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts.

The Bank-MAHW Line associated with Mill Brook was determined through observation of multiple corroborating Bankfull Indicators, including scouring, wrack deposition, stain, changes in vegetation, and a relatively distinct separation between predominantly aquatic and terrestrial land. LEC met with the project surveyor on October 15, 2021 to provide instruction regarding the location of the Bank-MAHW boundary, which occurs along the top of slope containing Mill Brook. An MWRA sewer line occurs adjacent to Mill Brook.

3.2

Riverfront Area



Riverfront Area to Mill Brook

According to 310 CMR 10.58 (2) (a), *A Riverfront Area is the area of land between a river's mean annual high water line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.*

According to Section 9. L. of the Bylaw, *"Riverfront Area" shall mean the area of Land between a river's mean annual high water line and a parallel line measured 200 feet horizontally landward of the mean annual high water line.*

Riverfront Area includes land within 200 feet of the Bank-MAHW line associated with Mill Brook and encompasses roughly the northern half of the property. This 20,429± square foot area includes the wooded uplands, and 2,517± square feet of the paved parking lot associated with 1021 Massachusetts Avenue which is considered 'Degraded' in accordance with 310 CMR 10.58 (5).

4.

Proposed Activities

The Applicant proposes to demolish the existing structures, pavement, and associated site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building, with ground-level parking and retail space. The 25,017± square-foot structure

will measure 137 feet wide and 183 feet long. Living space will be provided on floors 2 through 5, and the 5th floor will be set back from the building façade to mitigate the massing of the structure, so it will appear more as a 4-story building from the ground.

A single vehicle entrance to the ground-level parking (52 spaces) from Massachusetts Avenue is proposed along the western portion of the front building façade, and a paved walkway will extend from the sidewalk to the retail space situated within the southeastern portion of the building. A paved walkway extends from the rear of the structure toward Massachusetts Avenue along the western property boundary for fire access and safety.

The garage floor elevation will be set at Elevation 99.5, near the elevation of the existing sidewalk along Massachusetts Avenue. Fill will be required beneath the structure to carry this elevation toward the rear of the structure and to accommodate a stormwater infiltration system proposed off the rear of the structure. The land above the stormwater management system slopes away from the structure, and retaining wall measuring up to 7 feet high is proposed to minimize site grading and preserve as much of the wooded Riverfront Area as possible.

5. Mitigation Measures

The Applicant intends to implement erosion controls to protect adjacent properties during construction, provide stormwater management, provide Riverfront restoration and enhancement, establish a meadow, provide additional Riverfront Area mitigation, and install a green roof and cool roof as part of the proposed project. These mitigating measures are intended to meet or exceed the regulatory requirements enumerated in the *Act Regulations* and to promote climate resiliency in accordance with the *Bylaw Regulations*. A description of each of these mitigating measures is provided below.

5.1 Erosion and Sedimentation Control

The Applicant proposes to implement an erosion control program to protect Mill Brook and adjacent properties from sedimentation during construction activities. The plan for the control of potential impacts to the adjacent Wetland Resource Areas is based on DEP guidelines and will be comprised of staked compost filter tubes along the Limit-of-Work line. All erosion control measures will remain in place until disturbed areas are stabilized by vegetation. The location of the proposed erosion controls and a detail are shown on the *Site Plan* (Appendix B).

5.2 **Stormwater Management**

The Applicant proposes to install a single subsurface infiltration system to collect and infiltrate stormwater run-off from the proposed structure as depicted on the *Site Plans*. The *Stormwater Report* (Appendix C) contains the DEP Stormwater Checklist, supporting calculations, and an *Operation and Maintenance Plan*, and demonstrates that peak rates and volumes of stormwater run-off will be maintained or reduced for the 2, 10, 50, and 100-year statistical storm events. The system has been designed using the Extreme Precipitation Tables for the Northeast Regional Climate Center (Cornell University), in an effort to promote climate resiliency associated with the project.

5.3 **Riverfront Area Restoration and Enhancement**

The Applicant proposes to remove invasive species and install native shrubs and groundcover plants within the roughly 7,700 square-foot wooded Riverfront Area to remain; and establish a 6,000± square-foot meadow north of the proposed structure, above and adjacent to the stormwater infiltration system, as further described below.

5.3.1 **Invasive Species Management and Revegetation**

As described above, the 7,700 square foot woodland to remain within the northern portion of the site contains almost entirely invasive/exotic plants and contains scattered trash and debris, which will be removed and appropriately disposed of. While the Applicant proposes to retain the canopy of Norway maple, pruning of branches at the direction of a certified arborist is proposed to increase sunlight penetration for the understory. All invasive saplings (>2" caliper) and shrubs (and trash/debris) will be removed using small equipment. Invasive ivy, garlic mustard, etc., within the groundcover will be removed by hand and disposed of off-site. The woodland will then be planted with 100 native shrubs and 100 native ferns as specified below, and seeded with the *Conservation Shade Mix* available from Ernst Seeds per the manufacturer's specifications.

Shrubs:

- 20 Witch hazel (*Hamamelis virginiana*)
- 20 American hazelnut (*Corylus americana*)
- 20 Black chokeberry (*Aronia melanocarpa*)
- 20 Gray dogwood (*Cornus racemosa*)
- 20 Maple-leaf viburnum (*Viburnum acerifolium*)

Ferns:

50 Hay-scented fern (*Dennstaedtia punctilubula*)

50 Christmas fern (*Polystichum acrostichoides*)

The restored woodland will be monitored for two (2) growing seasons by a qualified wetland scientist to document restoration success, identify any re-growth of invasive/exotic plants to be managed, and/or identify any re-planting efforts required due to mortality. The wetland scientist shall prepare annual monitoring reports describing the success of the restoration effort and any required management efforts, and representative site photographs, and will submit these reports to the Commission by October 31.

5.3.2

Meadow

A native meadow measuring 6,000± square feet will be established by seeding the altered land off the rear of the structure with the *shall be seeded with a 50/50 mixture of the Conservation Shade Mix and Partially Shaded Area Roadside Mix*, both available from Ernst Seeds. The Applicant recognizes that sunlight penetration for the area adjacent to the proposed structure will be limited, which is why shade-tolerant seed mixtures are proposed, and a 6,000± square-foot meadow is proposed. The alteration footprint north of the structure measures 6,861± square feet. Once established, this meadow will be mowed once annually in the fall after October 15 to promote seed dispersal and keep out woody invasive plants. Signage will be posted off the northeastern and northwestern building corners indicating the meadow is to be mowed once annually in the fall after October 15.

5.4

Green Roof and Cool Roof

The Applicant is committed to promoting climate resiliency for the project by establishing and maintaining green roof and cool roof spaces for the entire roof area. Common outdoor space (a courtyard) is provided on the 2nd story roof, 50% of which will be a green roof vegetated with sapling trees, perennials, ferns, and grasses, including:

Trees:

Sweetbay Magnolia (*Magnolia virginiana*)

Flowering Dogwood (*Cornus florida*)

Eastern Redbud (*Cercis canadensis*)

Shadblow/Serviceberry (*Amelanchier canadensis*)

Shrubs:

Inkberry (*Ilex glabra*)
Creeping juniper (*Juniperus communis*)
Red twig dogwood (*Cornus sericea*)
Lowbush blueberry (*Vaccinium angustifolium*)

Perennials, Grasses, and Ferns:

Black-eyed Susan (*Rudbeckia hirta*)
Purple Coneflower (*Echinacea purpurea*)
Wild Blue Lupine (*Lupinus perennis*)
Wild Bergamot (*Monarda fistulosa*)
Switchgrass (*Panicum virgatum*)
Fescue (*Festuca* sp.)
Broom Sedge Bluestem (*Andropogon virginicus*)
Sedum (*Sedum* sp.)
Christmas Fern (*Polystichum acrostichoides*)
Maidenhair Fern (*Adiantum pedatum*)

The remaining 50% of the courtyard will comprise of a combination of wood (ipe) decking and light-colored pavers. The 4th floor roof will be a combination of ‘cool roof’ light-colored rubber membrane and wood or composite decking, while the 5th floor roof will be ‘cool roof’ light-colored rubber membrane only. In addition to providing usable outdoor space, the intent of using plantings, wood (or composite) decking, and light-colored roofing materials is to mitigate for the heat-island that can result from black rubber membrane roofs and increased impervious areas.

6. Regulatory Performance Standards

The *Act Regulations* provide specific performance standards for work within Riverfront Area. Citations of the pertinent performance standards are provided below, along with a description of how the project meets these standards. While this NOI Application is being filed under the *Act* only, the Applicant has implemented design elements intended to comply with the *Bylaw* and *Bylaw Regulations* which will be administered by the ZBA during the Comprehensive Permit Application. The Applicant will be requesting waivers from the ZBA for those *Bylaw* performance standards that cannot be met, such as the tree replacement requirements provided in Section 24 of the *Bylaw Regulations*.

6.1

Riverfront Area

The performance standards outlined in 310 CMR 10.58 (4) apply to the project and include:

- (a) Protection of Other Resource Areas: No other Wetland Resource Areas will be altered as part of the proposed project
- (b) Protection of Rare Species: The site is not contained within Rare Species Habitat as noted above in Section 2.1;
- (c) Practicable and Substantially Equivalent Economic Alternatives: An Alternatives Analysis is provided below; and
- (d) No Significant Adverse Impact: A discussion of Significant Adverse Impacts is provided below.

6.1.1

Alternatives Analysis

The purpose of this project is to construct an affordable housing condominium building in Arlington. The Applicant has evaluated: a no build alternative; other locations in town; a smaller building footprint with additional stories; a smaller building footprint with less units; and the preferred alternative, as further described below.

6.1.1.1

No Build Alternative

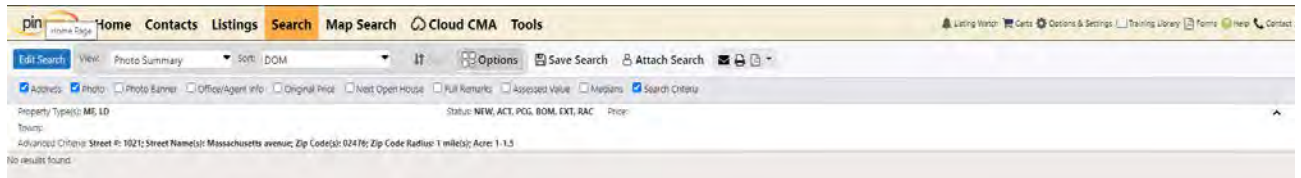
A No-Build Alternative does not contribute to the need for affordable housing in Arlington, and does not include the mitigating measures intended to improve the Riverfront Area function and value compared to existing conditions, including invasive species management and revegetation with native plants, and stormwater management where none exists today.

6.1.1.2

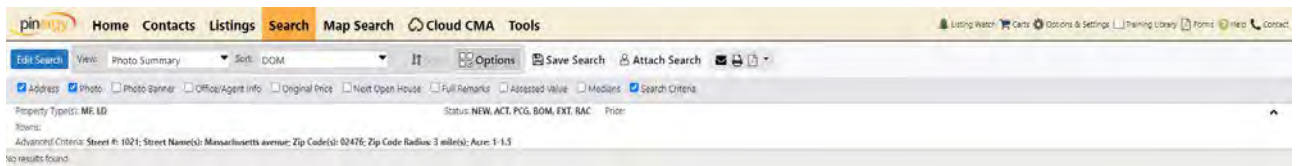
Alternative Locations in Arlington

The Act Regulations at 310 CMR 10.58 (4) (c) 2. c. state: *...the area under consideration for practicable alternatives extends to the original parcel and the subdivided parcels, any adjacent parcels, and any other land which can reasonably be obtained within the municipality for: i. activities associated with residential subdivision or housing complexes, institutional, industrial, or commercial projects...*

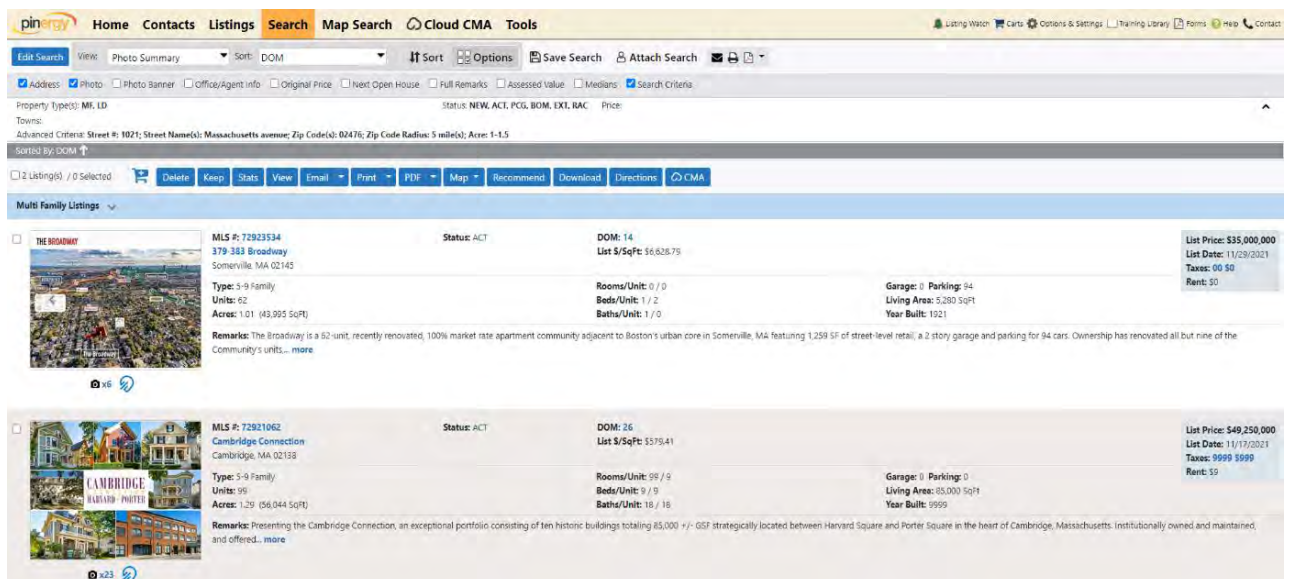
The purpose of this project is to construct an affordable housing condominium building in the town of Arlington. On December 13, 2021, the Applicant conducted MLS searches for alternative land opportunities. The criteria for the first search were as follows: Land or Multifamily properties, 1-1.5 acres in size, located within 1 mile of 1021 Massachusetts Avenue. The search yielded 0 results, as shown below.



The Applicant then increased the radius to 2 miles while keeping all other search criteria the same. This search also yielded 0 results, as shown below.



The Applicant also conducted a 5-mile radius MLS search with the same criteria, which we are providing for illustrative purposes only, since it is not germane to the alternatives analysis since the search includes land outside Arlington town limits. This search yielded 2 results in Somerville and Cambridge, both of which are multi-unit portfolios ranging from \$35,000,000 to \$49,250,000. Neither are appropriate for redevelopment and are not considered viable alternatives.



The Selling Broker for this transaction, Albert Lynch, of Compass Real Estate, does not know of any alternative off-market opportunities in the proximity of the subject property. The Applicant also contacted two other brokers who are familiar with the local market, Paul Cirignano of Leading Edge and Stephen Bremis of Bremis Realty. Neither know of any off-market properties that would be appropriate for the Applicant to consider.

Given this analysis of MLS offerings and conversations with experienced brokers regarding the current state of the market, the Applicant is confident that there are no viable alternative land parcels to the properties at 1021 & 1025 Massachusetts Avenue.

6.1.1.3 Smaller Building Footprint with More Stories

The Applicant also analyzed the possibility of constructing a taller building with a smaller footprint to meaningfully reduce the footprint of Riverfront Area alteration. The current building is designed as a 5-story building totaling sixty feet in height, with the fifth floor set back from the plane of the remaining floors to give the appearance and massing of a 4-story structure.

The construction is currently comprised of one level of steel and concrete podium and four stories of wood framing on top of the podium. Increasing the building to six stories or seventy-two feet in height would require construction of two levels of steel and concrete and four stories of wood framing. Construction costs for the 5-story building prototype are approximately \$300.00 per square foot in today's market. Adding a second level of steel and concrete will increase construction costs by nearly 15%, making the project financially unfeasible. Further, the Applicant does not believe that a 6-story building would be appropriate for the neighborhood with respect to scale and massing.

6.1.1.4 Smaller Building Footprint with Less Units

The Applicant also explored reducing the number of units for the project and making the building smaller to enable us to meaningfully reduce Riverfront Area alteration. Specifically, reducing the structure depth by roughly 35 feet would eliminate approximately 11 units proposed within the northern portion of the building, thereby reducing unit count by roughly 23%. Given the acquisition cost for both parcels, and construction costs, the project will not be able to attain an industry acceptable rate of return of approximately 15%, and thus will be uneconomic.

6.1.1.5 Preferred Alternative

The preferred alternative balances the requirement for a 48-unit count with an acceptable amount of Riverfront Area alteration (<5,000 square feet – not including stormwater

management, as further discussed below), and includes significant mitigating measures that in many ways will improve the function and value of the Riverfront Area compared to existing conditions. These include a robust invasive species management and revegetation plan for the wooded Riverfront Area to remain within the northern portion of the site; a meadow; and a conservatively-designed, climate-resilient stormwater infiltration system where none exists today. The preferred alternative also includes interior, ground-level parking, which minimizes the impervious footprint associated with an exterior parking lot.

6.1.2

No Significant Adverse Impact

As described above, the wooded Riverfront Area on the site is largely vegetated with invasive exotic plants, contains scattered trash and debris, and is separated from Mill Brook by an off-site paved parking lot. Many of the functions and values the on-site Riverfront Area provides is intrinsically limited. While Riverfront Area alteration is proposed as part of the project, the Applicant also proposes mitigating measures intended to improve the Riverfront Area functions and values.

310 CMR 10.58 (4) (d) states:

The work, including proposed mitigating measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, s. 40...

310 CMR 10.58 (4) (d) 1. states:

Within 200 foot Riverfront Areas, the issuing authority may allow the alteration of up to 5000 square feet or 10% of the riverfront area within the lot, whichever is greater, on a lot recorded on or before October 6, 1997 or lots recorded after October 6, 1997 subject to the restrictions of 310 CMR 10.58 (4) (c) 2.b.vi., or up to 10% of the riverfront area within a lot recorded after October 6, 1997, provided that:

According to the deeds, the properties were both established in 1864. and together contain 20,429± square feet of Riverfront Area, 10% of which is 2,042.9± square feet which is less than the 5,000 square foot threshold referenced above. Of the total Riverfront Area on the site, roughly 2,517 square feet are impervious – comprising of the paved parking lot associated with 1025 Massachusetts Avenue. The balance of the Riverfront Area on the site contains an island of wooded upland surrounded by residential and commercial development on all sides, and is separated from Mill Brook by the paved parking lot located north of the site. This isolation and separation reduces the value of the Riverfront Area on the subject property. In total, the Applicant proposes

to alter 4,749± square feet of Riverfront Area as further detailed below, including 4,266± square feet for the proposed structure within Riverfront Area, and 483± square feet of walkway within Riverfront Area.

The *Act Regulations* at 310 CMR 10.58 (4) (d) 1. d. also state: *...The calculation of square footage of alteration shall exclude areas of replication or compensatory flood storage required to meet performance standards for other resource areas, or any area of restoration within the riverfront area. **The calculation also shall exclude areas used for structural stormwater management measures**, provided there is no practicable alternative to siting these structures within the riverfront area and provided a wildlife corridor is maintained (e.g. detention basins shall not be fenced)* [Emphasis added].

The Applicant has proposed the stormwater infiltration system north of the proposed structure, as far away from Mill Brook as possible. Situating the stormwater infiltration system elsewhere on the property (such as along Massachusetts Avenue, or along one of the side property boundaries) would result in relocating and/or reconfiguring the building closer to Mill Brook. Accordingly, the 6,821± square feet of alteration associated with the stormwater infiltration system is excluded from the calculation of Riverfront Area alteration, and the proposed Riverfront Area alteration measures 4,749± square feet.

- (a) *At a minimum, a 100-foot wide area of undisturbed vegetation is provided...If there is not a 100-foot wide area of undisturbed vegetation within the riverfront area, existing vegetative cover shall be preserved or extended to the maximum extent feasible to approximate a 100-foot wide corridor of natural vegetation...*

No work is proposed within the 0-100' Riverfront Area. This area is currently comprised of woodland dominated by invasive/exotic species, and an off-site parking lot separating the property from Mill Brook. The on-site portion of the Riverfront Area (roughly 7,700± square feet), including the 0-100' Riverfront Area, will be restored and enhanced via trash and debris removal; invasive species management; and re-vegetation with native shrubs, ferns, and a native seed mix.

- (b) *Stormwater is managed according to the standards established by the Department in its Stormwater Policy.*

Stormwater management exceeding DEP requirements is proposed by collecting and infiltration roof run-off via a subsurface stormwater management system located north of the structure. The system was designed using the Extreme Precipitation Tables for the Northeast Regional Climate Center (Cornell University).

- (c) *Proposed work does not impair the capacity of the riverfront area to provide important wildlife habitat functions...*

The Applicant proposes improvements to the existing Riverfront Area by removing trash and debris, removing invasive/exotic shrubs and groundcover plants, and by installing and maintaining native shrubs and groundcover plants. Additionally, a meadow is proposed off the rear of the structure. These efforts will improve wildlife habitat function and value associated with the site.

- (d) *Proposed work shall not impair groundwater or surface water quality by incorporating erosion and sedimentation controls and other measures to attenuate nonpoint source pollution.*

Erosion controls will be installed along the Limit-of-Work line, and a stormwater management exceeding DEP requirements is proposed to collect and infiltrate stormwater runoff from the roof area. The project improves groundwater and surface water quality by providing stormwater management where none exists today.

6.2

Bylaw Regulations and General Climate Resiliency

While the Arlington ZBA will administer project review under the *Bylaw* and *Bylaw Regulations* with input from the Commission, the Applicant has made efforts to comply with *Bylaw* and *Bylaw Regulations* to the extent practicable given that this is an affordable housing development. Waivers will be requested from the ZBA for those sections of the *Bylaw* and *Bylaw Regulations* that cannot be met and the Applicant will demonstrate to the ZBA that they are entitled to such waivers during the Comprehensive Permit review process. For example, the Applicant will not be able to comply with the Vegetation Removal and Replacement requirements enumerated under Section 24 of the *Bylaw Regulations*; however, invasive species management and replanting with native shrubs and groundcover plants is proposed. Alternatively, Section 31 of the *Bylaw Regulations* discussed Climate Change Resilience. This is a section of the *Bylaw Regulations* that the Applicant has made efforts to comply with as further described below.

The Applicant shall, to the extent practicable and applicable as determined solely by the Commission, integrate considerations of adaptation planning into their project to promote climate change resilience so as to protect and promote resource area values into the future. These considerations are especially

important in Land Subject to Flooding (floodplain) and Riverfront Area and other Resource Areas which protect the interest of Flood Control and Storm Damage Prevention, including Adjacent Upland Resource Areas. These Resource Areas may be directly impacted by extreme weather events expected to be more prevalent or more intense due to climate change, in surface runoff of pollutants, and in wildlife habitat due to changes in temperature. The Applicant shall consider the project's adaptation to potential climate change impacts by addressing the following:

- (1) Describe project design considerations to limit storm and flood damage during extended periods of disruption and flooding as might be expected in extreme weather events. See Vegetative Wetlands Section 21, Land Subject to Flooding Section 23, and Adjacent Upland Resource Area Section 25, of these Regulations.*

While no work is proposed within Vegetated Wetlands, Land Subject to Flooding, or the Adjacent Upland Resource Area, the Applicant proposes a stormwater management system that exceeds DEP standards by incorporating the Extreme Precipitation Tables for the Northeast Regional Climate Center (Cornell University). Little to no stormwater management exists on the site today. Accordingly, the project improves the site's climate change resiliency in accordance with the requirements in the *Bylaw Regulations*.

- (2) Describe project stormwater surface runoff, which may increase due to storm surges and extreme weather events, and how this will be managed / mitigated to prevent pollution (including nutrients from fertilizers, roadway runoff, etc.) from entering the resource area with consideration of eliminating impervious surfaces as feasible. See Stormwater Management Section 33 of these Regulations.*

The project includes a conservatively-designed stormwater management system that will collect and infiltrate stormwater run-off from the proposed roof area. Lawn areas associated with the site have been minimized and a meadow is proposed for the rear portion (which eliminates the need for fertilizers and/or pesticides often needed to establish and maintain lawn areas). Lastly, the Applicant has selected a building design with interior ground-level parking, which reduces overall impervious surface, and significantly reduces surface run-off and pollutants associated with a standard exterior parking lot. Peak rates and volumes for the 2, 10, 50, and 100-year statistical storm events are maintained or reduced.

(3) *Describe project vegetation / planting plans and other measures to improve the resiliency of the wildlife habitat of the resource area to withstand potential temperature and rainfall changes (drought and excess) due to climate change. See Vegetation Removal and Replacement Section 24 of these Regulations.*

The Applicant proposes to manage invasive/exotic plants and establish and maintain a native understory and groundcover within the woodland north of the proposed building. A meadow also is proposed to be established and maintained north of the structure. Further, heat island effect will be mitigated for by including green roof space and cool roof space. The green roof portion of the courtyard will be planted largely with native plants.

(4) *Describe measures to protect proposed structures and minimize damage to structures due to the impacts of climate change.*

While the site is located well above the 1% Annual Chance Floodplain elevation associated with the Mill River, all living space has been elevated above the ground-level parking garage, which mitigates for flash flooding within the street that could occur during or following heavy precipitation.

7. Summary

On behalf of the Applicant, MAJ Investment, LLC (Matthew P. Maggiore, Contact), LEC is filing this NOI Application with the Arlington Conservation Commission to demolish two (2) structures and associated driveways, parking lots, and site appurtenances, and construct a 48-unit, 5-story affordable housing condominium building (under Chapter 40B) with ground-level parking garage and retail space. Portions of the proposed project are located within the outer portion of Riverfront Area associated with Mill Brook. Site grading, a retaining wall, erosion controls, invasive species management and native revegetation, meadow establishment, and stormwater management are proposed.

This NOI Application is being filed under the *Act* and *Act Regulations* only, as the Arlington Zoning Board of Appeals will administer the *Bylaw* and *Bylaw Regulations* under the Comprehensive Permit process. The Applicant anticipates filing the Comprehensive Permit Application with the ZBA early in 2022; however, would like the opportunity for the Commission to review the project for compliance with the *Act* and *Act Regulations* and provide comments prior to the Comprehensive Permit Application process.

Arlington Conservation Commission, *Town of Arlington Wetlands Protection Bylaw* (Article 8) Town of Arlington, Massachusetts.

Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways 1995. *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act, A Handbook*. 89 pp.

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), www.state.ma.us/dep
Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00),
www.state.ma.us/dep

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map (Map Number 25017C0416E), Middlesex County, June 4, 2010.

New England Hydric Soils Technical Committee. 2019, 4th ed., *Field Indicators for Identifying Hydric Soils in New England*, New England Interstate Water Pollution Control Commission, Lowell, MA.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988 Massachusetts*. U.S. Department of the Interior, Fish and Wildlife Service. NERC-88/18.21

Appendix A

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map



Office of Geographic and Environmental Information
(MassGIS), Commonwealth of Massachusetts
Executive Office of Environmental Affairs

1:25,000 USGS Topographic Images - April 2001



Environmental Consultants, Inc.

Wakefield, MA
781.245.2500

www.lecenvironmental.com

Figure 1: USGS Topographic Map
1021 & 1025 Massachusetts Avenue
Arlington, MA

December 17, 2021



0 250 500 Feet
100 of 188

LEGEND



SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



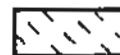
ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
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ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



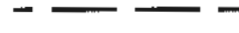
1% annual chance floodplain boundary



0.2% annual chance floodplain boundary



Floodway boundary



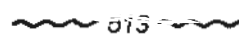
Zone D boundary



CBRS and OPA boundary



Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.



Base Flood Elevation line and value; elevation in feet*

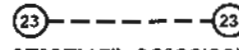
(EL 987)

Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988



Cross section line



Transect line

87°07'45", 32°22'30"

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

2476000mN

1000-meter Universal Transverse Mercator grid values, zone 19

600000 FT

5000-foot grid values: Massachusetts State Plane coordinate system, Mainland zone (FIPSZONE 2001), Lambert Conformal Conic projection

DX5510 x

Bench mark (see explanation in Notes to Users section of this FIRM panel)

● M1.5

River Mile

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

June 4, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



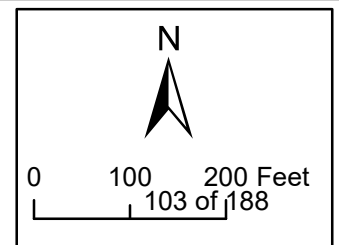
Environmental Consultants, Inc.

Wakefield, MA
781.245.2500

www.lecenvironmental.com

Figure 3: MassGIS Orthophoto & NHESP Map
1021 & 1025 Massachusetts Avenue
Arlington, MA

December 17, 2021

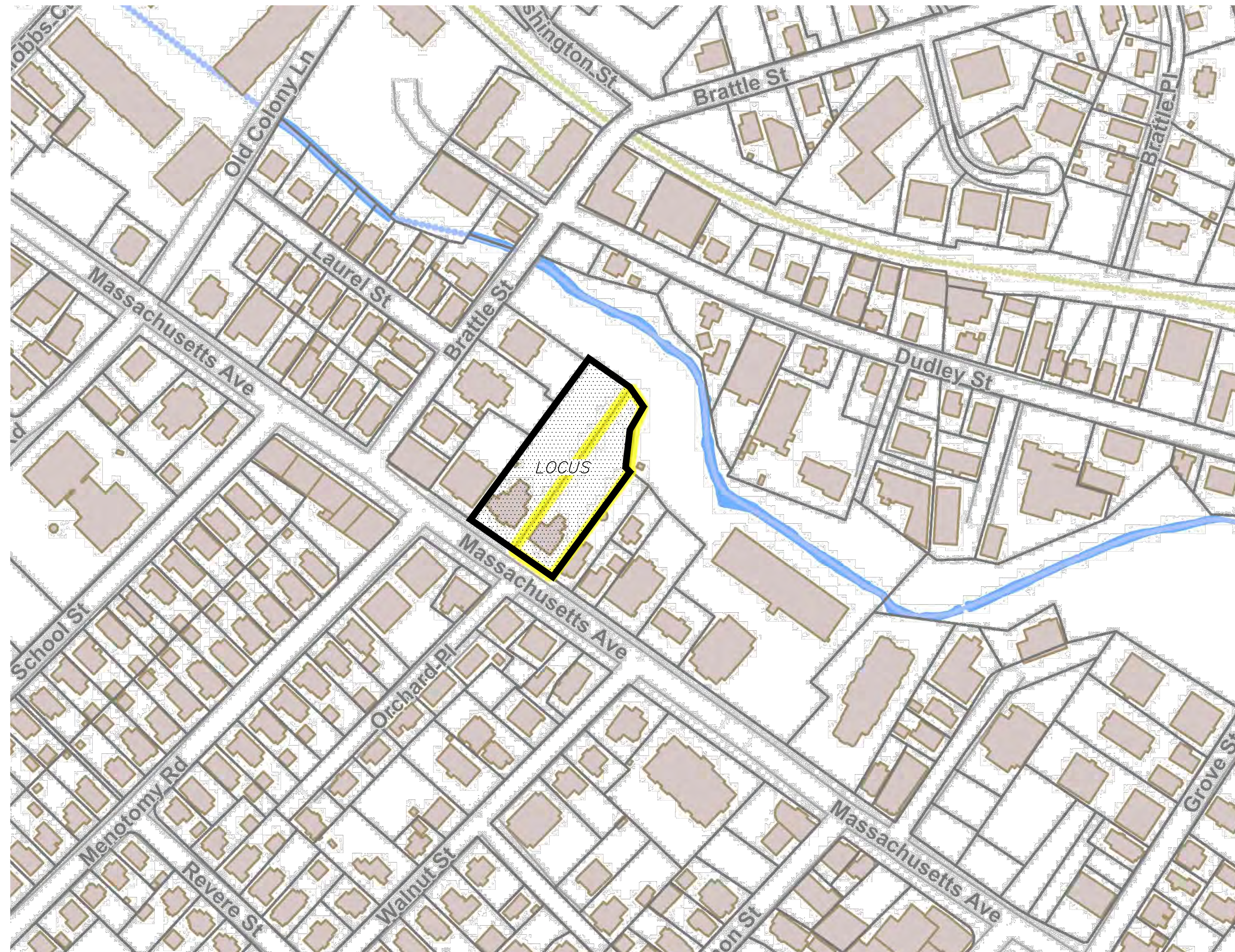


Appendix B

1021 & 1025 Massachusetts Avenue Notice of Intent Plan Set,
dated December 9, 2021, prepared by Patriot Engineering

1021 & 1025 MASSACHUSETTS AVENUE (1021 ASSESSORS MAP 55 LOT 19) (1025 ASSESSORS MAP 55 LOT 20) NOTICE OF INTENT PLAN SET

LOCATED IN ARLINGTON, MA
DECEMBER 09, 2021

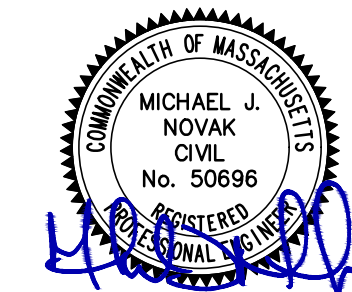


LOCUS CONTEXT MAP
(SCALE 1"=100')



PREPARED BY:

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com



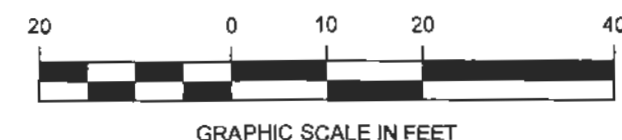
SHEET INDEX

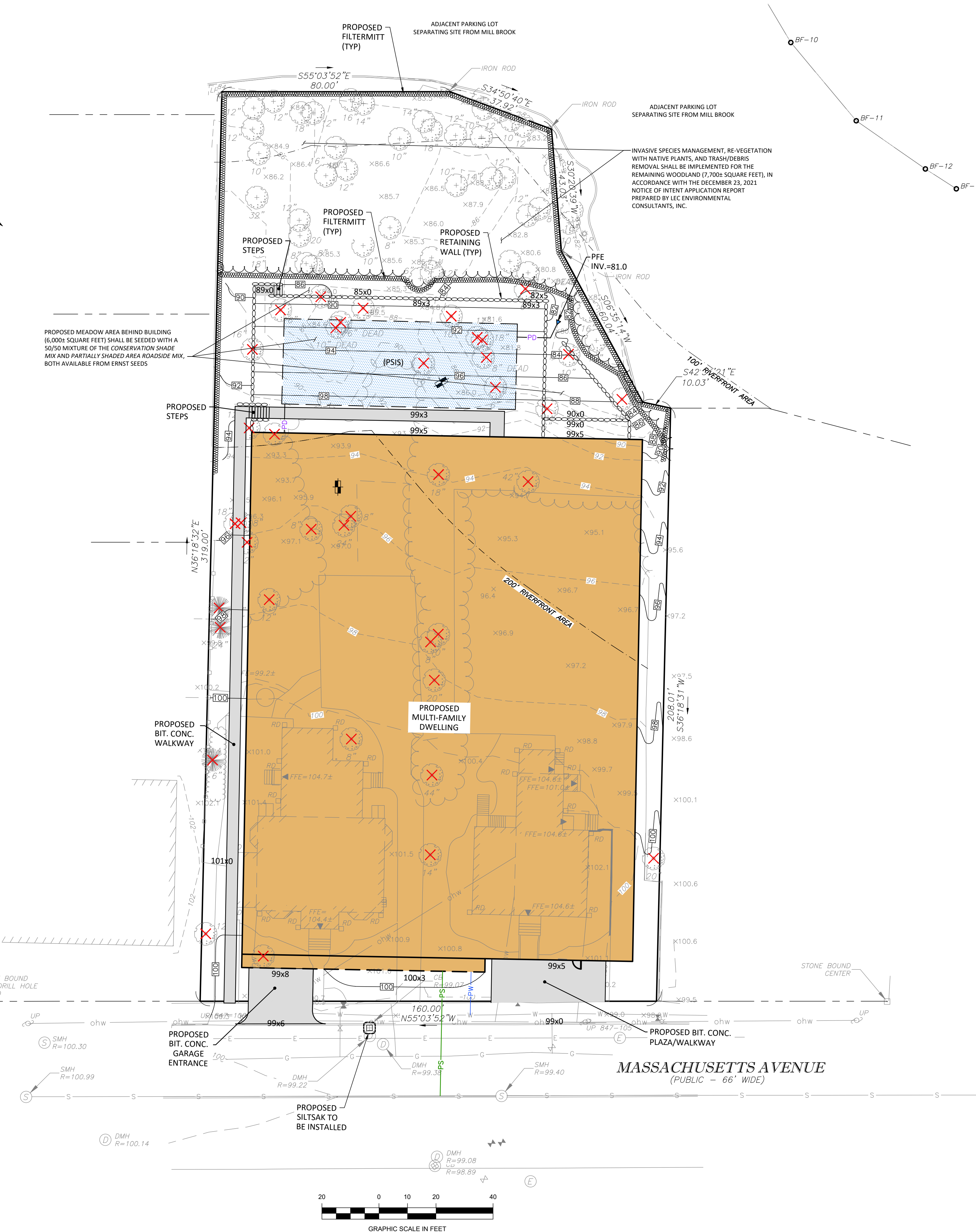
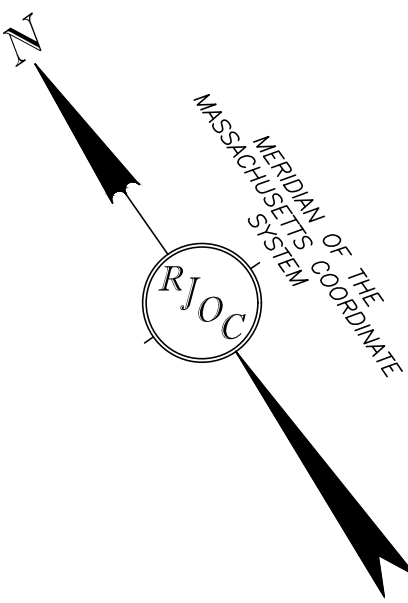
1. COVER SHEET
2. EXISTING CONDITIONS PLAN
3. NOTICE OF INTENT PLAN
4. DETAIL SHEET

APPLICANT:

MAJ INVESTMENT, LLC
13 WHEELING AVENUE
WOBBURN, MA 01801

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NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING SITE CONDITIONS, AS THEY EXISTED AT THE TIME OF THE FIELD SURVEY, OF THE LOCUS PARCEL FOR DESIGN PURPOSES. THIS PLAN WAS PREPARED FROM AN ACTUAL SURVEY MADE ON THE GROUND USING TOTAL STATION METHODS BY R. J. O'CONNELL & ASSOCIATES (RJOC).
2. UNDERGROUND UTILITIES SHOWN ARE FROM OBSERVED SURFACE INDICATIONS, SUBSURFACE INDICATIONS, AND COMPILED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY, AS OF THE DATE OF THIS SURVEY. NO INFORMATION REGARDING RECORD UTILITIES HAS BEEN PROVIDED BY ELECTRIC AND GAS PROVIDERS. BEFORE CONSTRUCTION CALL "DIG SAFE" 811.
3. THE HORIZONTAL DATUM IS THE MASSACHUSETTS COORDINATE SYSTEM (NAD83). THE VERTICAL DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). DATUMS WERE ESTABLISHED USING RTK GPS METHODS.
4. THE POSITIONAL ACCURACY OF THE DATA AND PHYSICAL IMPROVEMENTS ON THIS PLAN MAY BE APPROXIMATE. ANY USE OF ELECTRONIC DATA CONTAINED IN AUTOCAD VERSIONS OF THIS PLAN TO GENERATE COORDINATES OR DIMENSIONS NOT SHOWN ON THE PLAN IS NOT AUTHORIZED.
5. EDGE OF BANK-MEAN ANNUAL HIGH WATER LINE WAS DELINEATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON OCTOBER 15, 2021 AND WAS LOCATED IN THE FIELD BY TOTAL STATION METHODS ON THE SAME DAY BY RJ O'CONNELL & ASSOCIATES.
6. CONTOUR INTERVAL IS TWO FOOT (2').

LEGEND

(NOT ALL FEATURES CONTAINED IN THIS LEGEND APPEAR ON THE PLAN)			
		BOUNDARY LINE	
		ABUTTING PROPERTY LINE	
		SEWER SERVICE	
		DRAIN SERVICE	
		WATER SERVICE	
		GAS LINE	
		ELECTRIC LINE	
		TELEPHONE LINE	
		OVERHEAD WIRES	
		CHAIN LINK FENCE	
		STOCKADE FENCE	
		INDEX CONTOUR	
		INTERMEDIATE CONTOUR	
	UTILITY POLE		CONCRETE CURB
	LIGHT POLE		VERTICAL GRANITE CURB
	ELECTRIC HAND HOLE		BITUMINOUS CONCRETE CURB
	CABLE MANHOLE		HANDICAP
	SEWER MANHOLE		HIGH DENSITY POLYETHYLENE
	DRAIN MANHOLE		CONCRETE
	CATCH BASIN		LANDSCAPE AREA
	WATER VALVE		DOOR
	FIRE HYDRANT		SIGN
	SPRINKLER CONNECTION		PARKING COUNT / COMPACT NUMBER
	POST INDICATOR VALVE		DECIDUOUS TREE
	BOLLARD		CONIFEROUS TREE
	GAS METER		FROM RECORD PLANS
	GAS VALVE		RETAINING WALL
	ROOF DRAIN		DETECTABLE WARNING PAD
	AREA DRAIN		PROPOSED SPOT GRADE
	IRRIGATION CONTROL VALVE		PROPOSED CONTOUR
	SPOT GRADE		PROPOSED CONTOUR
	TEST PIT		TREE PROPOSED TO BE REMOVED
	PROPOSED SUBSURFACE INFILTRATION SYSTEM		LIMIT OF RIVERFRONT AREA
	PROPOSED FILTERMITT		PROPOSED SEWER SERVICE
	PROPOSED TREELINE		PROPOSED WATER SERVICE
	TYPICAL		PROPOSED DRAIN LINE
	PROPOSED FLARED END		
	INVERT		

EXISTING TREE REMOVAL CHART

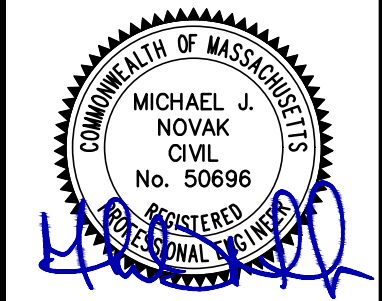
TREE DIAMETER (DBH)	NUMBER OF TREES PROPOSED TO BE REMOVED
< 8"	7
8" - 20"	26
> 20"	6

TREE REMOVAL NOTE:

1. TOTAL CALIPER OF EXISTING TREES PROPOSED TO BE REMOVED IS 566" DBH (DIAMETER AT BREAST HEIGHT).

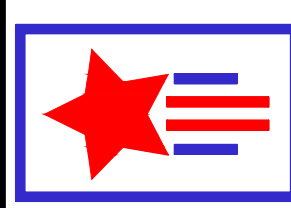
REVISIONS

DATE	DESCRIPTION	BY

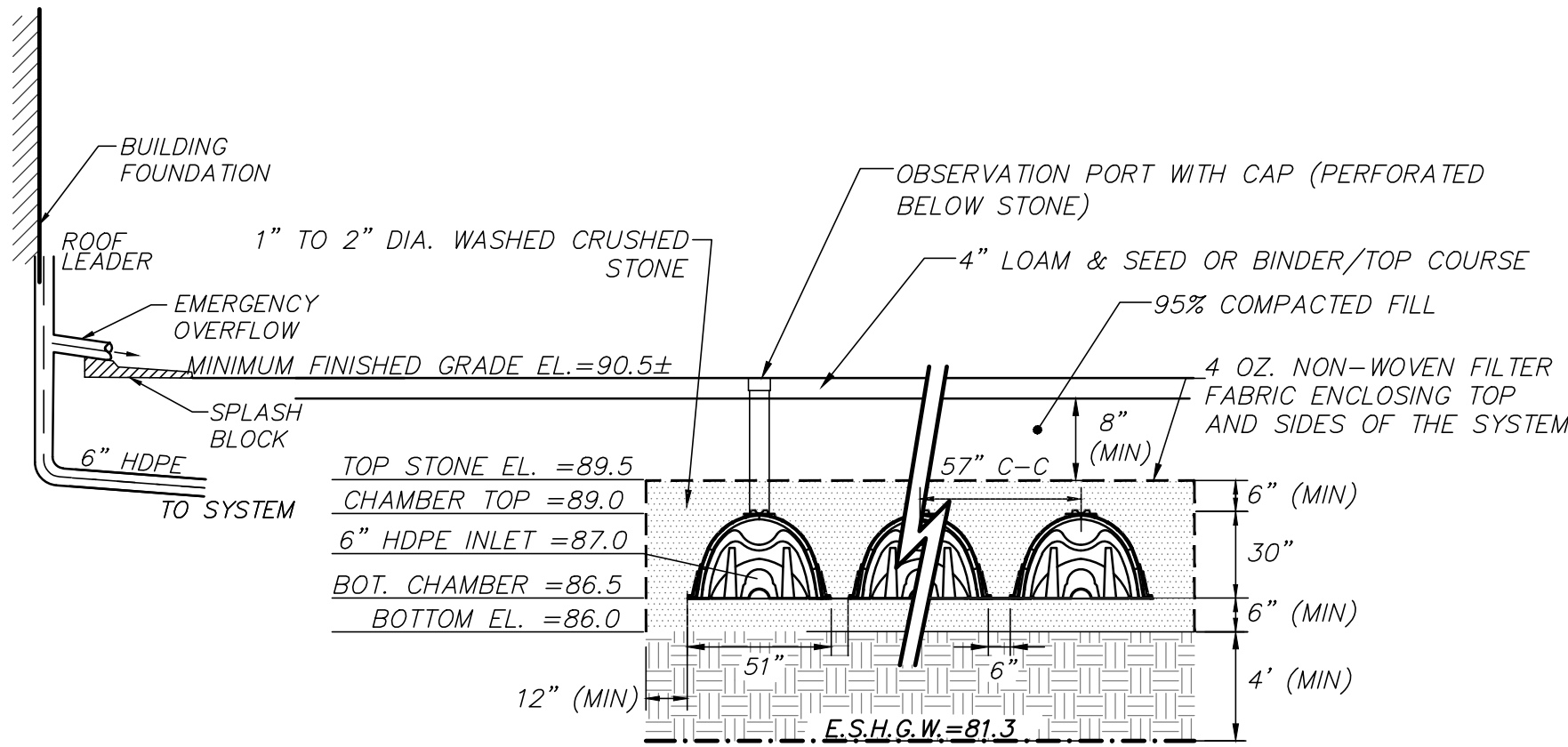


1021 & 1025 MASSACHUSETTS AVENUE
NOTICE OF INTENT PLAN
LOCATED IN
ARLINGTON, MASSACHUSETTS
(MIDDLESEX COUNTY)
PREPARED FOR
MAJ INVESTMENT, LLC

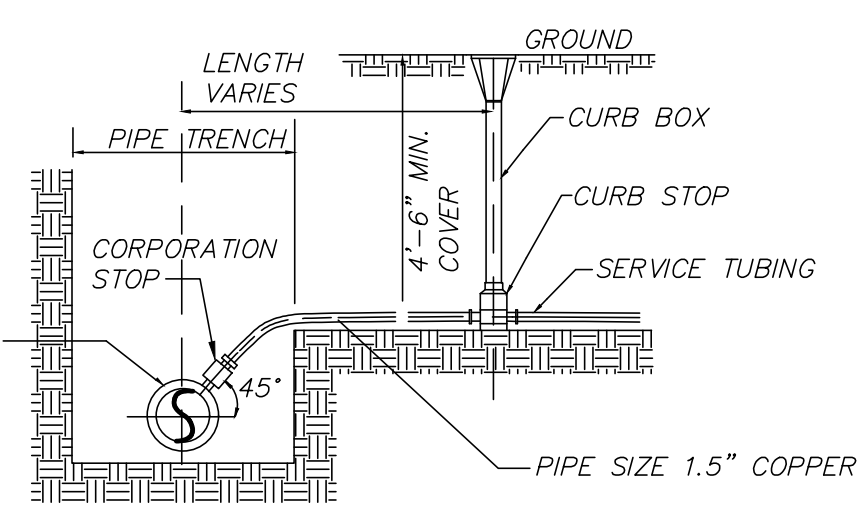
PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com



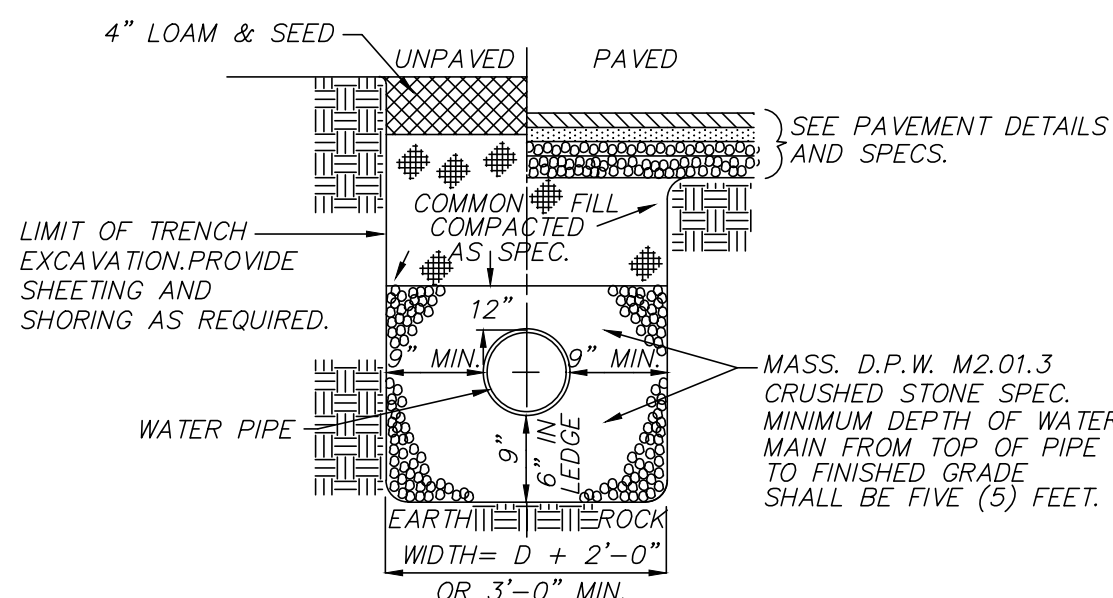
DATE:
DECEMBER 9, 2021
SCALE:
1"=20'
SHEET No.
3 OF 4
PROJECT No.
21583



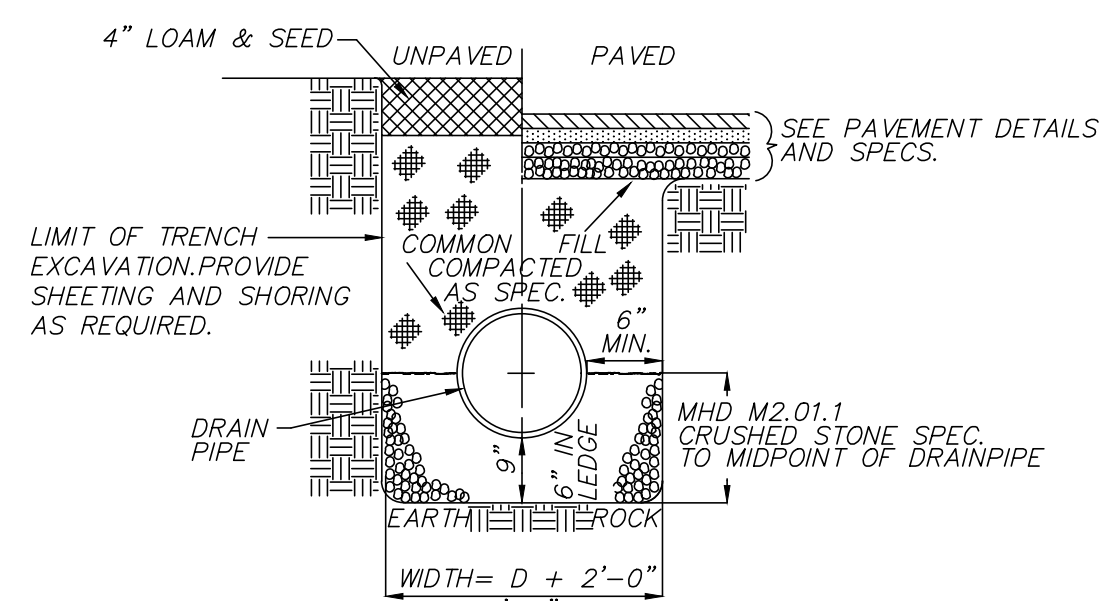
PROPOSED SUBSURFACE INFILTRATION SYSTEM (PSIS)
(CROSS SECTION)
(NOT TO SCALE)



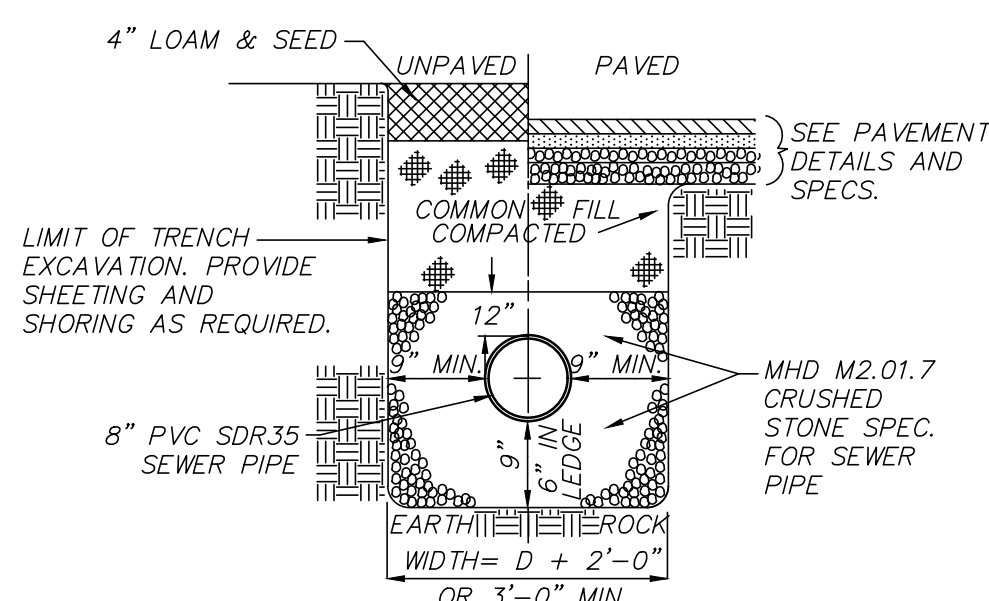
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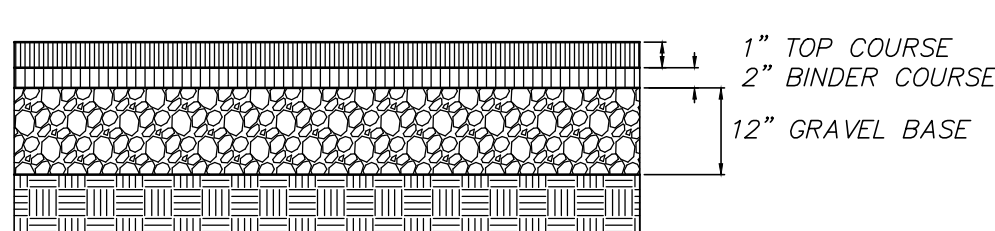
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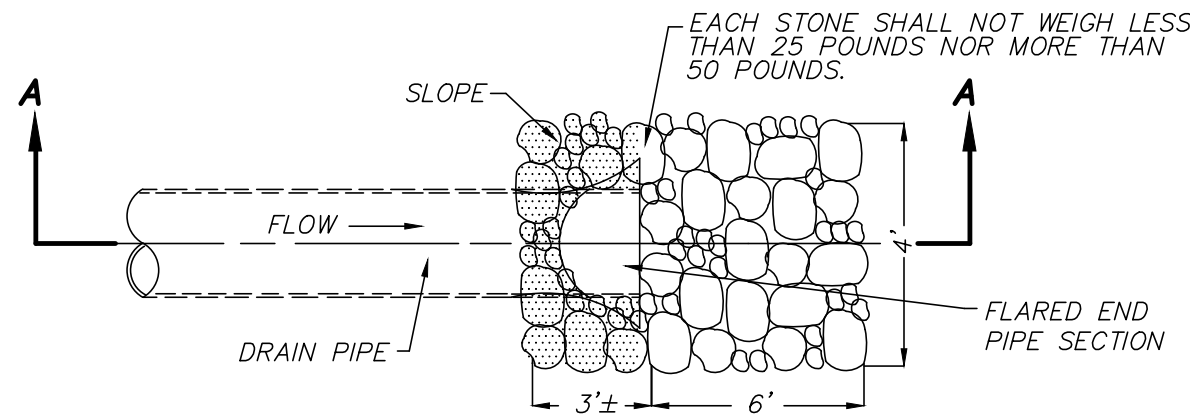
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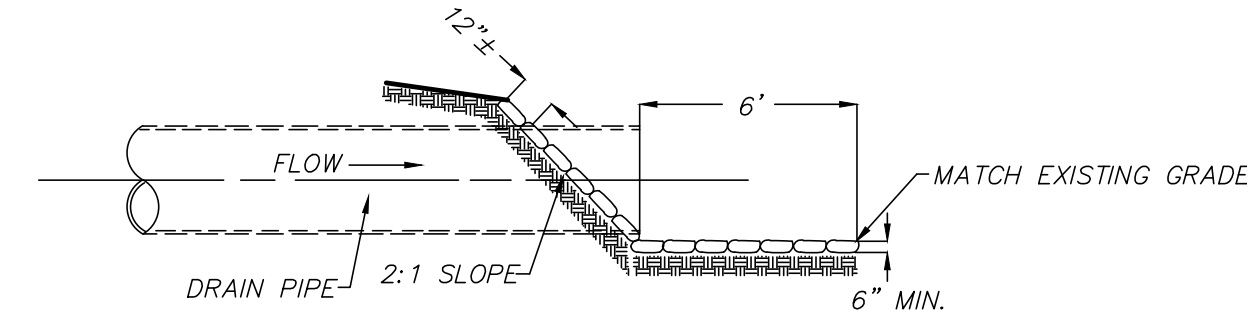
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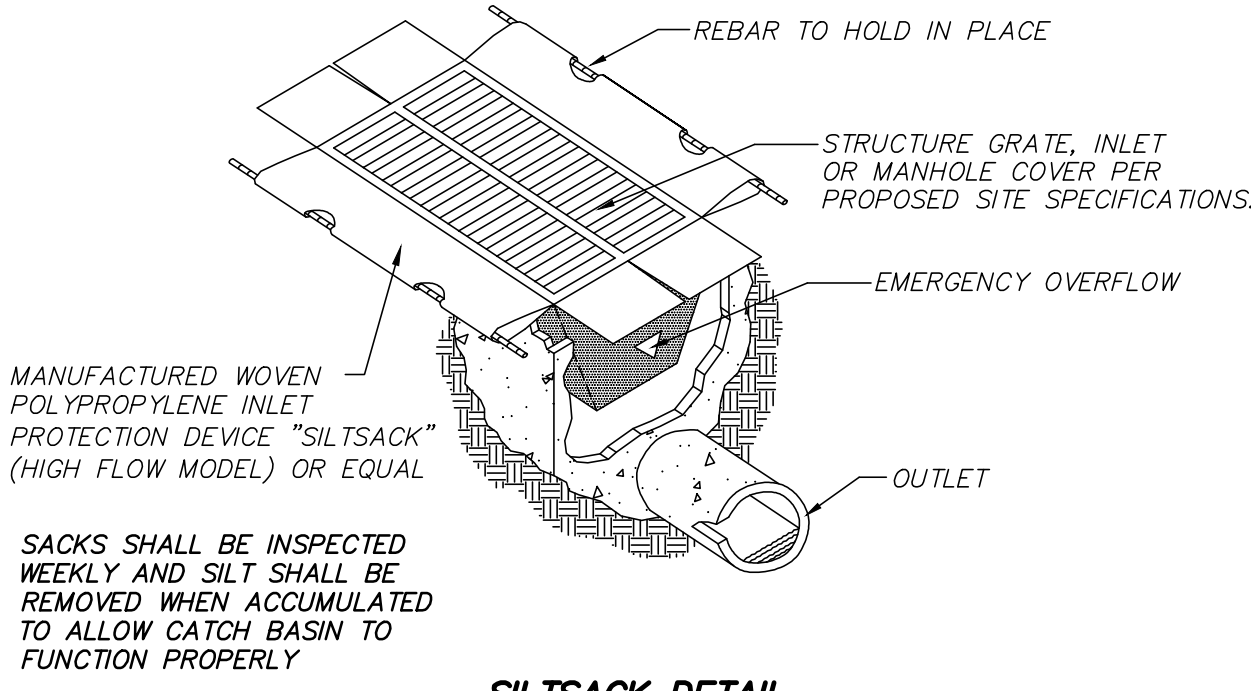
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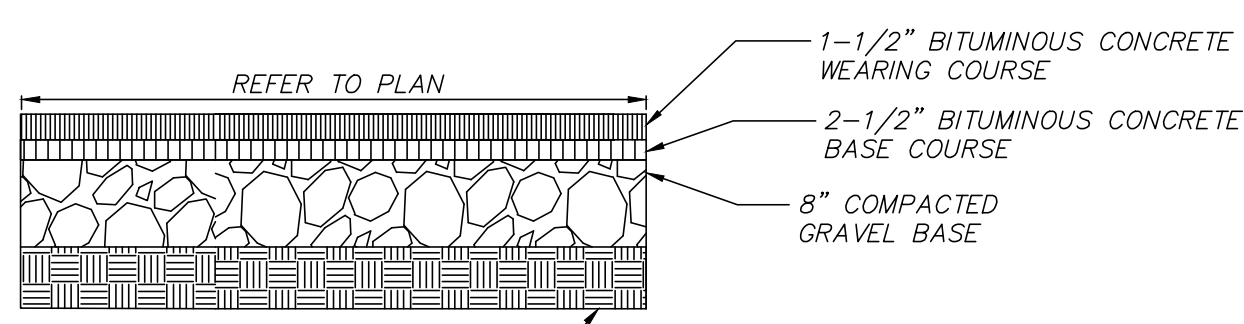
PLAN VIEW



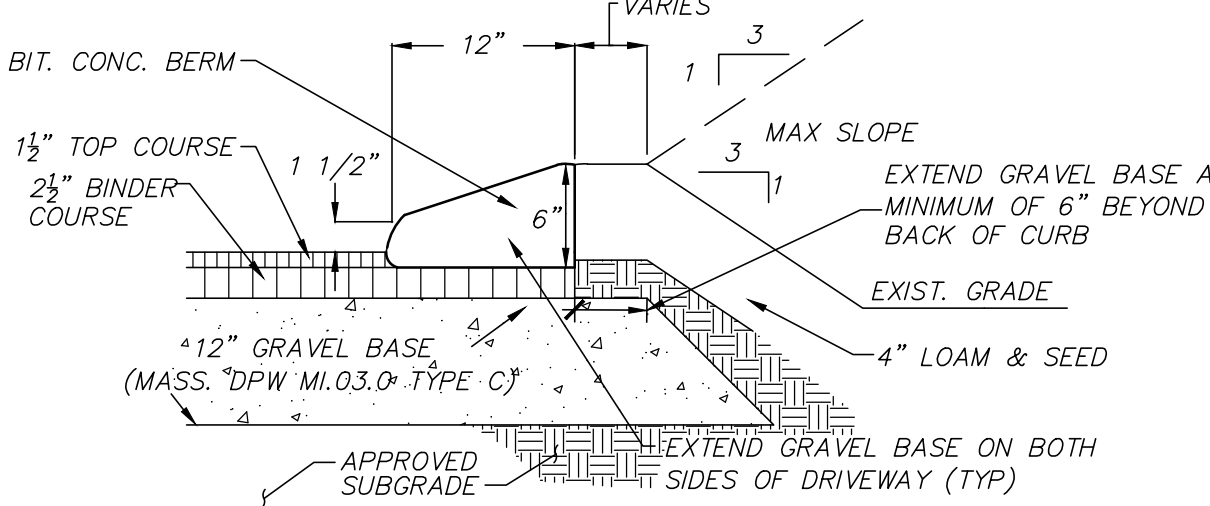
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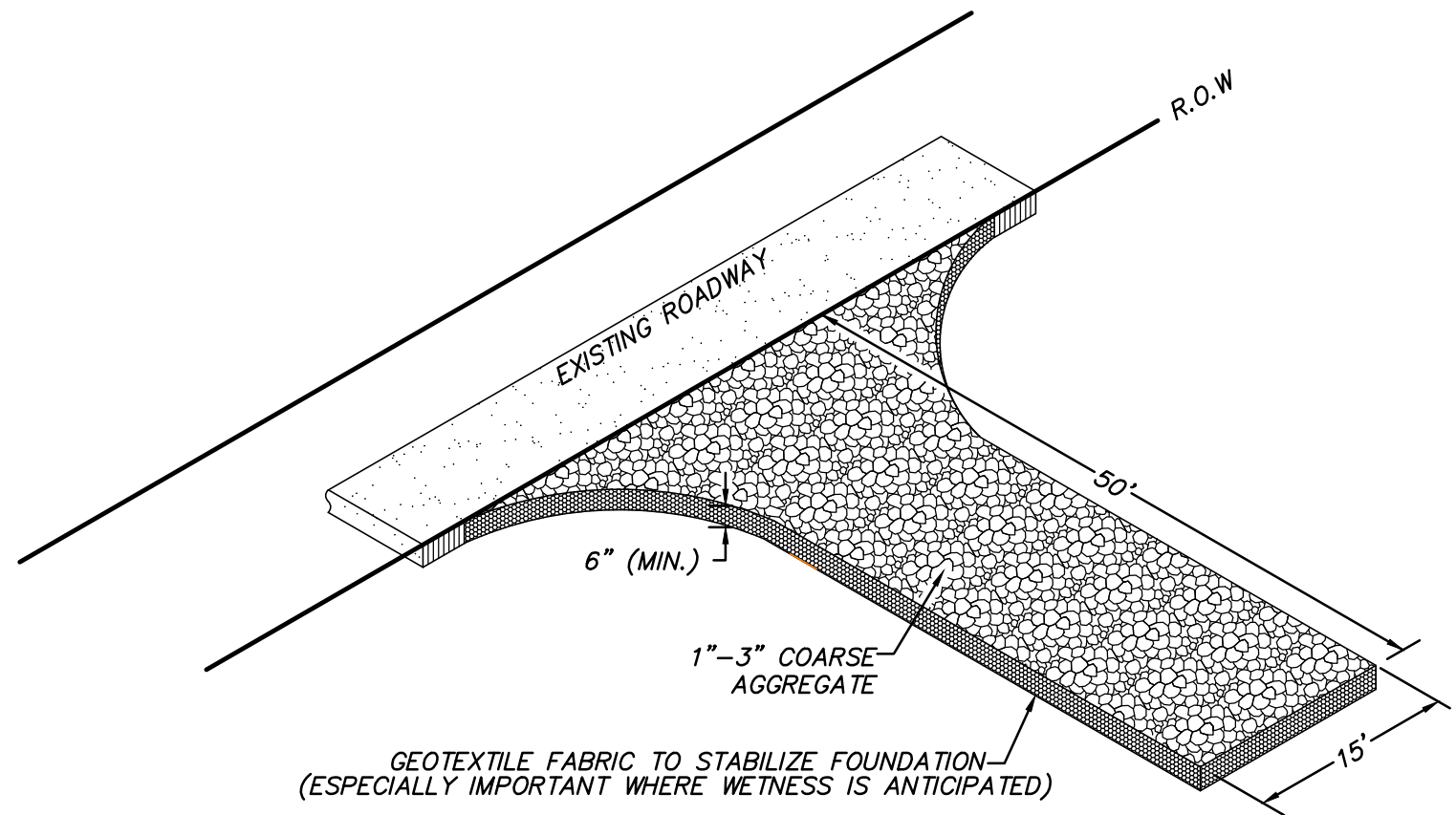
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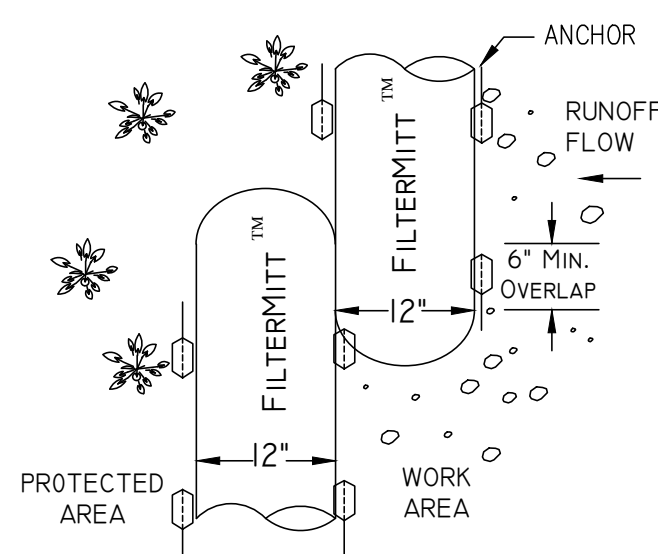
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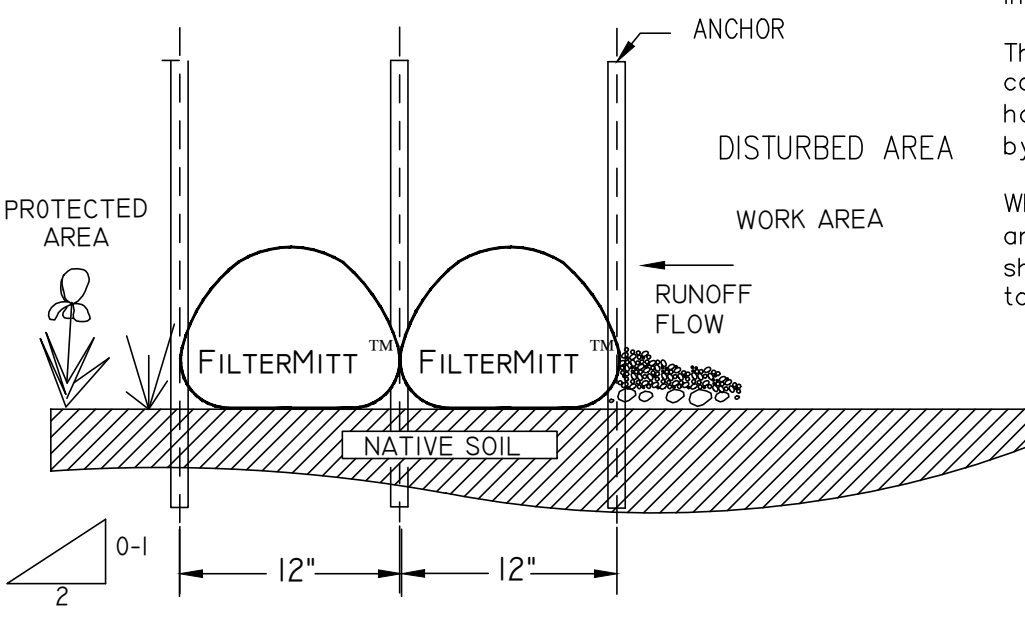
PROPOSED CAPE COD BERM
(NOT TO SCALE)



CONSTRUCTION TRACKING ENTRANCE/EXIT PAD
(NOT TO SCALE)



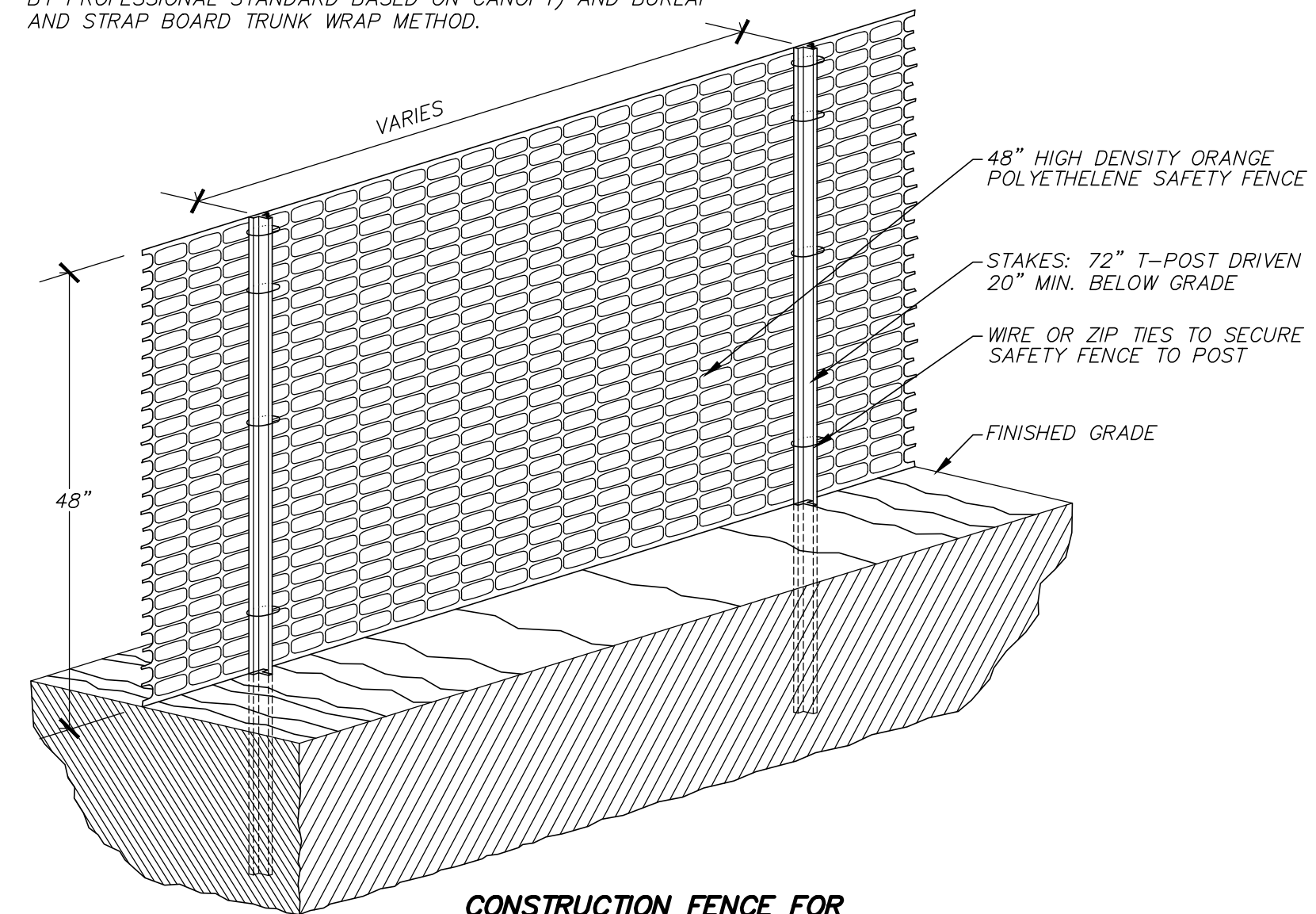
FILTERMITT TOP VIEW



FILTERMITT SECTION VIEW

FILTERMITT DETAIL
(NOT TO SCALE)

NOTE:
1. EXISTING TREES TO BE SAVED SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCE (OFF-SET FROM THE TREE TRUNK BY PROFESSIONAL STANDARD BASED ON CANOPY) AND BURLAP AND STRAP BOARD TRUNK WRAP METHOD.



CONSTRUCTION FENCE FOR TREE PROTECTION DETAIL
(NOT TO SCALE)

REVISIONS		DATE		DESCRIPTION	

1021 & 1025 MASSACHUSETTS AVENUE
SITE DETAILS
LOCATED IN
LEXINGTON, MASSACHUSETTS
(MIDDLESEX COUNTY)
PREPARED FOR
MAJ INVESTMENT, LLC

PATRIOT Engineering
35 BEDFORD STREET, SUITE 4
LEXINGTON, MASSACHUSETTS 02420
T: (978) 726-2654
www.patriot-eng.com

DESIGNED BY:	CHECKED BY:

DATE:	DECEMBER 9, 2021
SCALE:	1"=20'
SHEET No.	4 OF 4
PROJECT No.	21583

Appendix C

Stormwater Report, dated December 9, 2021 prepared by Patriot Engineering

STORMWATER MANAGEMENT

for

1021 & 1025 MASSACHUSETTS AVENUE
ARLINGTON, MASSACHUSETTS

Prepared for:

MAJ Investment, LLC
13 Wheeling Avenue
Woburn, Massachusetts 01801

Prepared by:

Patriot Engineering
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978) 726-2654

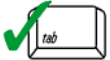
DATE: DECEMBER 9, 2021



Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the [Massachusetts Stormwater Handbook](#). The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



12-9-2021

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- ☒ New development
- ☐ Redevelopment
- ☐ Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
 - ☐ Credit 1
 - ☐ Credit 2
 - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- ☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- ☒ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- ☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- ☒ Soil Analysis provided.
- ☒ Required Recharge Volume calculation provided.
- ☐ Required Recharge volume reduced through use of the LID site Design Credits.
- ☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - ☒ Static
 - ☐ Simple Dynamic
 - ☐ Dynamic Field¹
- ☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.
- ☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- ☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- ☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
 - ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
 - ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- ☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- ☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- ☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- ☒ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- ☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - ☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - ☐ is within the Zone II or Interim Wellhead Protection Area
 - ☐ is near or to other critical areas
 - ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - ☐ involves runoff from land uses with higher potential pollutant loads.
 - ☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - ☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

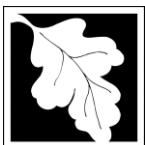
- ☒ The BMP is sized (and calculations provided) based on:
 - ☒ The ½" or 1" Water Quality Volume or
 - ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- ☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- ☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- ☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- ☒ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted **prior to** the discharge of stormwater to the post-construction stormwater BMPs.
- ☐ The NPDES Multi-Sector General Permit does **not** cover the land use.
- ☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- ☐ All exposure has been eliminated.
- ☐ All exposure has **not** been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- ☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- ☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- ☐ Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

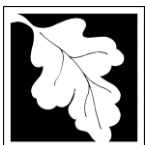
Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- ☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - ☐ Limited Project
 - ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - ☐ Bike Path and/or Foot Path
 - ☐ Redevelopment Project
 - ☐ Redevelopment portion of mix of new and redevelopment.
- ☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- ☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- ☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- ☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- ☐ The project is **not** covered by a NPDES Construction General Permit.
- ☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- ☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- ☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - ☒ Name of the stormwater management system owners;
 - ☒ Party responsible for operation and maintenance;
 - ☒ Schedule for implementation of routine and non-routine maintenance tasks;
 - ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
 - ☐ Description and delineation of public safety features;
 - ☐ Estimated operation and maintenance budget; and
 - ☒ Operation and Maintenance Log Form.
- ☐ The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- ☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- ☐ An Illicit Discharge Compliance Statement is attached;
- ☒ NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.

Stormwater Management Standards

Project Narrative:

The project site is comprised of two mixed-use lots located within the Neighborhood Office (B-1) District. The parcels are identified on the Town of Arlington Assessor's Map 55-2 as Lots 19 and 20. The subject properties have a total area of 47,085 s.f., and site features currently existing include two mixed-use dwellings, bituminous concrete driveways with parking lots, gravel areas, walkways, grassed/landscaped areas and wooded areas.

The applicant is proposing to construct a multi-story Chapter 40B development consisting of a multi-family dwellings (with an interior parking garage) and ground level retail space, along with a plaza, grassed and landscaped areas.

This proposal utilizes conventional stormwater management techniques including a subsurface infiltration system for the treatment and mitigation of stormwater.

The following is a summary of how the proposed project meets the DEP Stormwater Standards:

Standard 1: No new stormwater conveyances may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

There are no untreated stormwater conveyances proposed to discharge to wetlands or waters of the Commonwealth from the project.

Standard 2: Peak Rate Attenuation - Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

For the purpose of analyzing pre and post development stormwater peak rates of runoff, two (2) design points have been selected based on existing topographic conditions which were used for both the pre and the post peak rate calculations. The design points are Massachusetts Avenue to the southwest and the abutting property to the northeast.

The storm event rainfall frequencies used for this analysis have been selected based upon the Extreme Precipitation Tables for the Northeast Regional Climate Center. A full detail of peak rate attenuation along with supplemental stormwater calculations utilizing HydroCAD as well as pre and post drainage site plans have been submitted with the Definitive Subdivision Application. The details of this report will show that the peak rates of runoff for the 2-year, 10-year, 50-year and 100-year events have been either maintained or reduced from pre to post conditions through the use of a subsurface infiltration system.

The hydrologic calculations from the HydroCAD® have been included in this report and are located in section tab entitled "Hydrologic Calculations".

Proposed Design Points and Subcatchment Areas

Design Point #1 (DP#1) is Massachusetts Avenue to the southwest. The contributing area to the Design Point consists of Subcatchment 1 & 101.

Design Point #1:

<u>Storm Event</u>	<u>Existing Conditions (Pre)</u> <u>Peak Flow (CFS)</u>	<u>Proposed Conditions (Post)</u> <u>Peak Flow (CFS)</u>
2-Year (3.2 in./hr.)	0.09	0.01
10-Year (4.8 in./hr.)	0.27	0.05
50-Year (7.1 in./hr.)	0.58	0.14
100-Year (8.8 in./hr.)	0.83	0.23

Design Point #2 (DP#2) is the abutting bordering property to the northeast. The contributing area to the Design Point consists of Subcatchment 2 & 201.

Design Point #2:

<u>Storm Event</u>	<u>Existing Conditions (Pre)</u> <u>Peak Flow (CFS)</u>	<u>Proposed Conditions (Post)</u> <u>Peak Flow (CFS)</u>
2-Year (3.2 in./hr.)	0.73	0.35
10-Year (4.8 in./hr.)	1.88	0.90
50-Year (7.1 in./hr.)	3.83	2.92
100-Year (8.8 in./hr.)	5.36	5.28

Standard 3: Recharge - Loss of annual recharge to groundwater shall be eliminated or minimized...at a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This standard is met when the stormwater management system is designed to infiltrate the required recharge volume in accordance with the Mass Stormwater Handbook.

Loss of annual recharge to groundwater has been minimized through the use of stormwater Best Management Practices (BMP's), one (1) subsurface infiltration system, and a proposed operation and maintenance program are proposed for this project. One (1) subsurface infiltration system has been designed for recharging groundwater.

The classification is based upon the Natural Resource Conservation Service Maps dated May 1984 (map located in the Appendix to the narrative) the site consists of a mix of unclassified and Hydrological Group D soils. Onsite soil testing was conducted by Patriot Engineering on September 22, 2021 in the areas depicted on the attached plan. This

testing revealed a gravelly loamy sand parent material, which yields a Rawls Soil Group classification of A soils. Groundwater was not in either of the two test pit locations; therefore, the bottom of those test pits has been used as the estimated seasonal high groundwater elevation for design purposes.

Utilizing the current regulations, the proposed design will meet this standard as per the following calculation:

$$R_v = Fx$$

R_v = Required Recharge Volume

F = Target Depth Factor associated with hydrologic soil groups located in table 2.3.2 in Volume 3 of the Stormwater Management Handbook

x = Total impervious area proposed

Impervious area within project area (HSG A): 26,489 square feet (sf).

Required recharge volume depth factor for A type soils: 0.6 inches

Therefore R_v =

$$(26,489)(0.6\text{inches}/12\text{ inches per foot})$$

$$R_v = 1,324\text{ cubic feet (cf)}$$

The proposed subsurface infiltration system provides a total recharge storage volume of 4,024 cf below the outlet.

In accordance with the Stormwater Handbook, a capture area adjustment calculation has been provided in the appendix of this report to ensure a minimum of 65% of the site impervious areas are directed into recharge facilities. The calculation demonstrates the proposed project directs 95% of the site's proposed impervious surface areas will be directed toward the recharge facility.

Standard 4: Water Quality – Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). The standard is met with pollution prevention plans, stormwater BMP's sized to capture required water quality volume, and pretreatment measures.

The stormwater management system has been designed to remove a minimum of 80% of the average annual post-construction load of Total Suspended Solids (TSS). These percentages have been achieved by the use of a subsurface infiltration system which is collecting the runoff from the proposed roof via roof drains and downspouts. As roof runoff is considered "clean" runoff, not pretreatment is needed prior to recharging.

The Stormwater Management Handbook assigns TSS removal percentages to each treatment BMP. Each treatment BMP is sized to capture the required water quality volume as calculated in accordance with the Handbook in order to achieve the assigned TSS removal rates.

General Equation from Stormwater Management Handbook

$V_{wq} = (D_{wq})(A)$
 V_{wq} = required water quality volume
 D_{wq} = water quality depth (1" for critical areas, 0.5" for non-critical areas)
 A = impervious area

The following are treatment sizing calculations for portions of the treatment trains based on the 0.5" for non-critical areas:

Train 1 (Proposed Roof drains to PSIS)

$$V_{wq} = (25,071)(0.5"/12) = 1,045 \text{ cf}$$

The proposed subsurface infiltration system provides a total recharge storage volume of 4,024 cf below the outlet.

A separate document entitled "Operation and Maintenance & Erosion and Sedimentation Control Program for a Proposed Stormwater Management System" is included as part of this report. Suitable practices for source control and long-term pollution prevention have been identified and shall be implemented as discussed.

The utilization of pretreatment and treatment BMP's combined with the operation and maintenance plan provides compliance with this standard.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs) – Source control and pollution prevention shall be implemented in accordance with the Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.

Stormwater Standard 5 is not applicable to this project. The proposed development will not subject the site to higher potential pollutant loads as defined in the Massachusetts Department of Environmental protection Wetlands and Water Quality Regulations.

LUHPPLs are identified in 310 CMR 22.20B(2) and C(2)(a)-(k) and (m) and CMR 22.21(2)(a)(1)-(8) and (b)(1)-(6), areas within a site that are the location of activities that are subject to an individual National Pollutant Discharge Elimination System (NPDES) permit or the NPDES Multi-sector General Permit; auto fueling facilities, exterior fleet storage areas, exterior vehicle service and equipment cleaning areas; marinas and boatyards; parking lots with high-intensity-use; confined disposal facilities and disposal sites.

Standard 6: Critical Areas – Stormwater discharges to critical areas require the use of specific source control and pollution prevention measures and specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas.

Stormwater Standard 6 is not applicable to this project given that proposed stormwater does not discharge near a critical area. Critical areas being Outstanding Resource Waters and Special Resource Waters as designated in 314 CMR 4.0, recharge areas for public water supplies as defined in 310 CMR 22.02, bathing beaches as defined in 105 CMR 445.000, cold-water fisheries and shellfish growing areas as defined in 314 CMR

9.02 and 310 CMR 10.04. The design points are not considered a critical area therefore Standard #6 does not apply to this project.

Standard 7: Redevelopments – A redevelopment project is required to meet Standards 1-6 only to the maximum extent practicable. Remaining standards shall be met as well as the project shall improve the existing conditions.

Stormwater Standard 7 is not applicable to this project. Within the Stormwater Management Handbook (volume 1 chapter 1 page 20), the definition of a redevelopment project includes, “development, rehabilitation, expansion and phased projects on previously developed sites, provided the redevelopment results in no net increase in impervious area”.

This project will not result in a reduction of impervious area in the proposed conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan shall be implemented.

An Operation and Maintenance & Erosion and Sediment Control Program for a Proposed Stormwater Management System is included with this report. The program details the construction period operation and maintenance plan and sequencing for pollution prevention measures and erosion and sedimentation controls. Locations of erosion control measures for the project are depicted on the site plan set accompanying this report.

Standard 9: A long term Operation and Maintenance Plan shall be implemented.

An Operation and Maintenance & Erosion and Sediment Control Program for a Proposed Stormwater Management System is included with this report. The long term operation and maintenance section of the program provides details and the schedule for routine and non-routine maintenance tasks to be implemented at the completion of the project.

Standard 10: Prohibition of Illicit Discharges – Illicit discharges to the stormwater management system are prohibited.

Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater. Discharges to the stormwater management system from the following activities or facilities are permissible: Firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents. All other illicit discharges are prohibited.

There are no known illicit discharges anticipated through the completion of this project. During construction and post construction procedures are provided to dissipate the potential for illicit discharges to the drainage system. Post construction preventions of illicit discharges are described in the Operation and Maintenance Program under the Good Housekeeping Practices section of the report.

STORMWATER ANALYSIS & CALCULATIONS

for

1021 & 1025 MASSACHUSETTS AVENUE
ARLINGTON, MASSACHUSETTS

Prepared for:

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13 Wheeling Avenue
Woburn, Massachusetts 01801

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Date: December 9, 2021

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- TR 20 SCS Unit Hydrograph Procedure
- Runoff Curve Numbers
- Time of Concentration by TR55 Methodology
- Reach and Pond Rating by the Storage-Indication Method
- Manning Equation

SOURCE OF DATA

- Technical Report No. 20
- Technical Report No. 55
- Extreme Precipitation Tables for the Northeast Regional Climate Center
- Field Survey and Soil Testing by Meridian Associates, Inc.
- Massachusetts Stormwater Handbook February 2008

Calculation Objective

The purpose of this drainage analysis is to design a stormwater management system that maintains and/or reduces the peak rates and volumes of stormwater runoff from pre-development conditions in the post development conditions for the 2, 10, 50 and 100-year design storm events

The proposed stormwater management system designed for this project will consist of the installation of one (1) subsurface infiltration system to allow for the mitigation of the runoff from the proposed impervious areas within the project right of way.

There is one (1) proposed subsurface infiltration system to capture and mitigate stormwater runoff from the entire proposed roof. The installation of the subsurface infiltration system will allow the development to not have an increase in stormwater runoff (rate or volume) from the site during the 2, 10, 50 and 100-year design storms.

Classification of Soils

Existing soil conditions within the limits of the watershed analyzed for this study have been categorized as:

- Urban Land: Unclassified Hydrologic Group
- Udorthents, wet substratum: Hydrologic Group D

The classification is based upon the Natural Resource Conservation Service Maps dated May 1984 (map located in the Appendix to the narrative) the site consists of a mix of Urban Land (unclassified) and Hydrological Group D soils. Onsite soil testing was conducted by Patriot Engineering on September 22, 2021 in the areas depicted on the attached plan. This testing revealed a gravelly loamy sand parent material, which yields a Rawls Soil Group classification of A soils. Groundwater was not in either of the two test pit locations; therefore, the bottom of those test pits has been used as the estimated seasonal high groundwater elevation for design purposes.

Selection of Storm Events

The storm event rainfall frequencies used for this analysis have been selected based upon the Extreme Precipitation Tables for the Northeast Regional Climate Center. Rainfall frequency data has been provided as follows:

<u>Frequency</u>	<u>Rainfall [24 hour event (inch)]</u>
2 year	3.2
10 year	4.8
50 Year	7.1
100 year	8.8

Existing Site Overview

The project site is comprised of two mixed-use lots located within the Neighborhood Office (B-1) District. The parcels are identified on the Town of Arlington Assessor's Map 55-2 as Lots 19 and 20. The subject properties have a total area of 47,085 s.f., and site features currently existing include two mixed-use dwellings, bituminous concrete driveways with parking lots, gravel areas, walkways, grassed/landscaped areas and wooded areas.

The slope of the existing site promotes overland runoff in two (2) main directions: southwesterly toward Massachusetts Avenue and northeasterly toward an existing parking lot on the abutting property. This results in two (2) subcatchments (SC) and two (2) design points (DP):

- **Subcatchment SC-1** – This subcatchment area consists of portions of existing mixed-use buildings, driveway/walkways and grassed areas. Stormwater runoff generated in this subcatchment flows southwest to Massachusetts Avenue to design point 1 (DP1).
- **Subcatchment SC-2** – This subcatchment area consists of portions of existing mixed-use buildings, driveway/walkways, gravel areas, shed remnants and grassed/wooded areas. Stormwater runoff generated in this subcatchment flows northeast to the existing parking lot on the abutting property to design point 2 (DP2).

Proposed Site Overview

The proposed project is comprised of the development of the existing properties into a 40B mixed-use development. The applicant is proposing a multi-story mixed-use building with residential and ground level commercial components. The building will be constructed with an interior parking garage, driveway, walkways, a stormwater management system, new utilities and associated grassed/landscaped areas.

A subsurface drainage system has been designed in order to manage stormwater runoff in an appropriate and responsible manner. The proposed project has been developed with the intent of maintaining the existing drainage patterns of the site to the maximum extent practicable. In order to not increase runoff from the project site runoff from the proposed building roof will be directed to a subsurface infiltration system. The three (3) subcatchments in the post construction scenario are as follows:

- **Subcatchment SC101** – This subcatchment area consists of portions of the proposed driveway/walkway and grassed areas. Stormwater runoff generated in this subcatchment flows southwest to Massachusetts Avenue to design point 1 (DP1).
- **Subcatchment SC201** – This subcatchment area consists of proposed walkway/steps and grassed/wooded areas. Stormwater runoff generated in this subcatchment flows northeast to the existing parking lot on the abutting property to design point 2 (DP2).

- **Subcatchment SC202** – This subcatchment area consists of proposed roof area. Stormwater runoff generated in this subcatchment will be directed to proposed subsurface infiltration system (**PSIS-1**), via gutters and downspouts. PSIS-1 has been designed with an overflow system that allows a portion of the stormwater runoff directed to the system to overflow northeast to the existing parking lot on the abutting property to design point 2 (**DP2**).

Summary of Flows at the Design Point

Design Point 1 (DP1):

Peak Rates (CFS)

DP1	2-Year Storm	10-Year Storm	50-Year Storm	100-Year Storm
Existing	0.09	0.27	0.58	0.83
Proposed	0.01	0.05	0.14	0.23

Peak Volumes (CF)

DP1	2-Year Storm	10-Year Storm	50-Year Storm	100-Year Storm
Existing	361	894	1,842	2,622
Proposed	52	192	487	750

Design Point 2 (DP2):

Peak Rates (CFS)

DP2	2-Year Storm	10-Year Storm	50-Year Storm	100-Year Storm
Existing	0.73	1.88	3.83	5.36
Proposed	0.35	0.90	2.92	5.28

Peak Volumes (CF)

DP2	2-Year Storm	10-Year Storm	50-Year Storm	100-Year Storm
Existing	2,618	6,092	12,083	16,926
Proposed	1,248	3,079	9,238	14,222

Conclusion

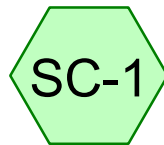
The calculations for each of the selected Design Points demonstrate that proposed site improvements will not result in an increase in the peak rate or volume of stormwater runoff for the 2-year, 10-year, 50-year or 100-year 24-hour storm events at the design points with the proposed stormwater mitigation system improvements.



Design Point 2



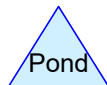
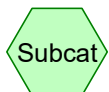
Subcatchment 2



Subcatchment 1



Design Point 1



Routing Diagram for 21583-PRE

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,747	39	>75% Grass cover, Good, HSG A (SC-1, SC-2)
42	98	Bulkheads (SC-2)
1,684	98	Driveway/Walkways (SC-1)
10,068	98	Driveway/Walkways/Patios (SC-2)
647	96	Gravel surface, HSG A (SC-2)
4,354	98	Roof (SC-1, SC-2)
192	98	Shed (SC-2)
7,708	30	Woods, Good, HSG A (SC-2)
12,656	77	Woods, Good, HSG D (SC-2)
47,098	69	TOTAL AREA

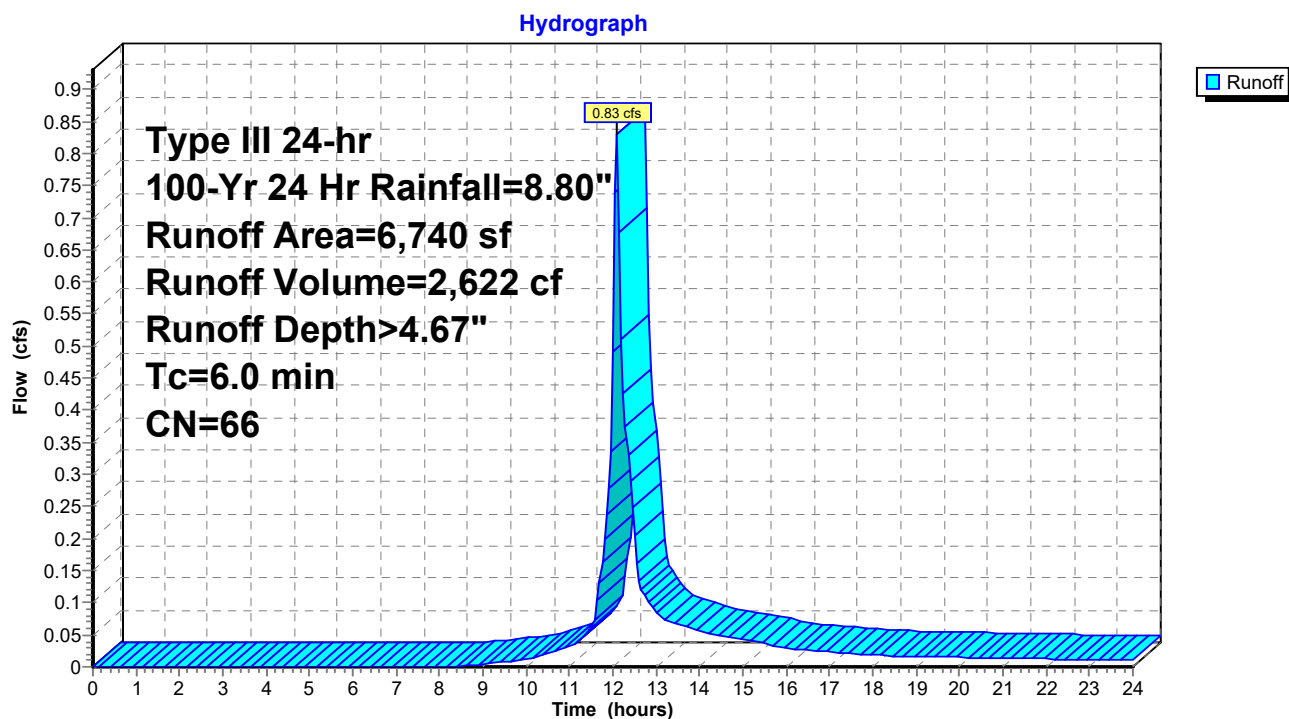
Summary for Subcatchment SC-1: Subcatchment 1

Runoff = 0.83 cfs @ 12.09 hrs, Volume= 2,622 cf, Depth> 4.67"
 Routed to Reach DP-1 : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

	Area (sf)	CN	Description
	3,644	39	>75% Grass cover, Good, HSG A
*	1,684	98	Driveway/Walkways
*	1,412	98	Roof
	6,740	66	Weighted Average
	3,644		54.07% Pervious Area
	3,096		45.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-1: Subcatchment 1

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Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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Summary for Subcatchment SC-2: Subcatchment 2

Runoff = 5.36 cfs @ 12.09 hrs, Volume= 16,926 cf, Depth> 5.03"
 Routed to Reach DP-2 : Design Point 2

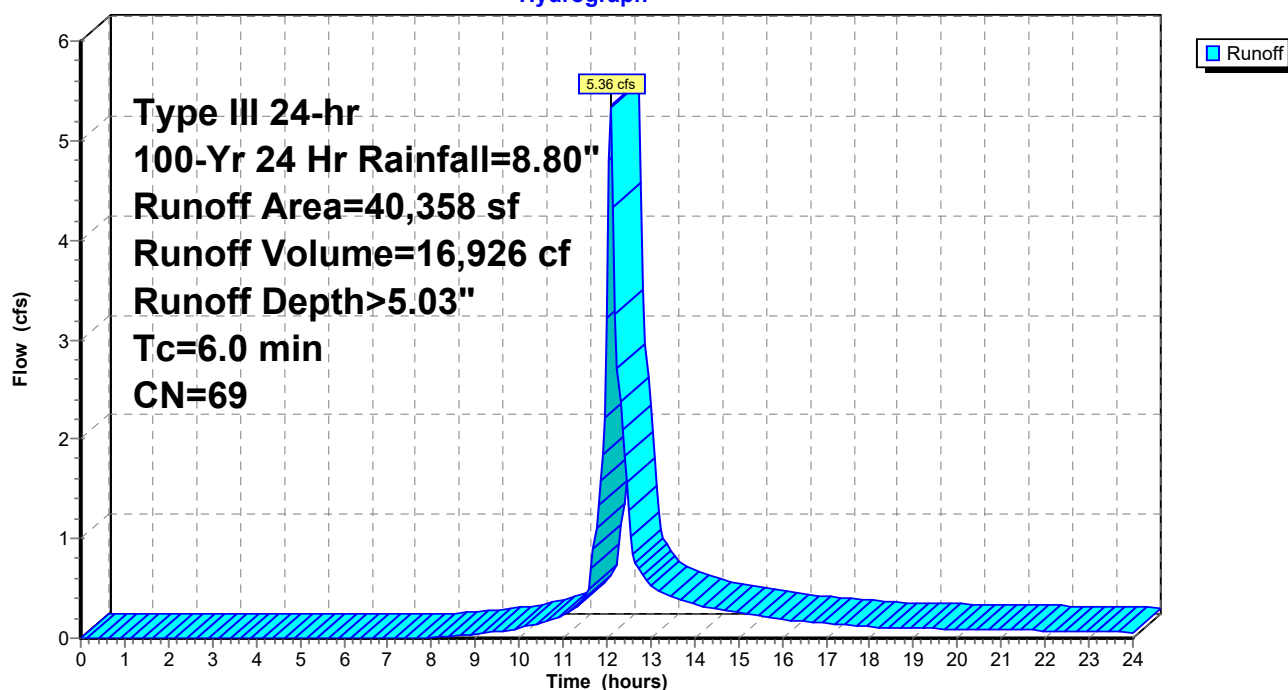
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
6,103	39	>75% Grass cover, Good, HSG A
12,656	77	Woods, Good, HSG D
* 10,068	98	Driveway/Walkways/Patios
* 2,942	98	Roof
7,708	30	Woods, Good, HSG A
* 42	98	Bulkheads
* 192	98	Shed
647	96	Gravel surface, HSG A
40,358	69	Weighted Average
27,114		67.18% Pervious Area
13,244		32.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-2: Subcatchment 2

Hydrograph

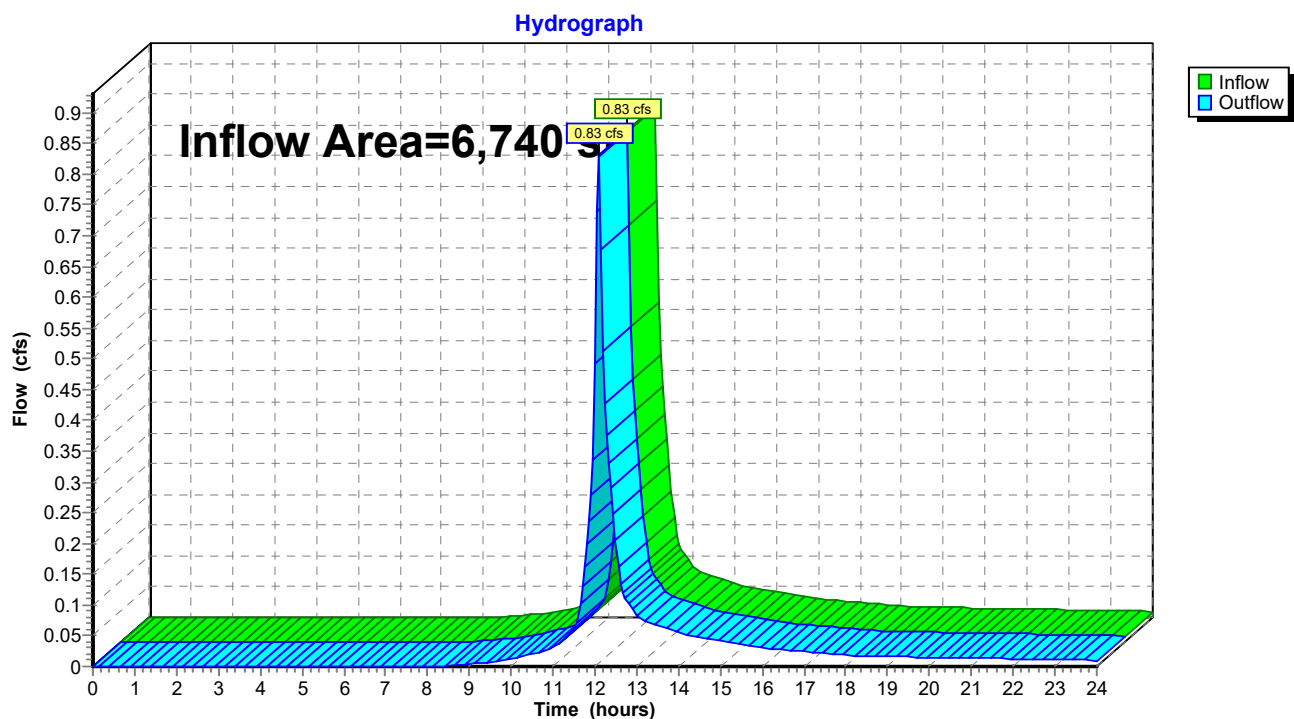


Summary for Reach DP-1: Design Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6,740 sf, 45.93% Impervious, Inflow Depth > 4.67" for 100-Yr 24 Hr event
Inflow = 0.83 cfs @ 12.09 hrs, Volume= 2,622 cf
Outflow = 0.83 cfs @ 12.09 hrs, Volume= 2,622 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

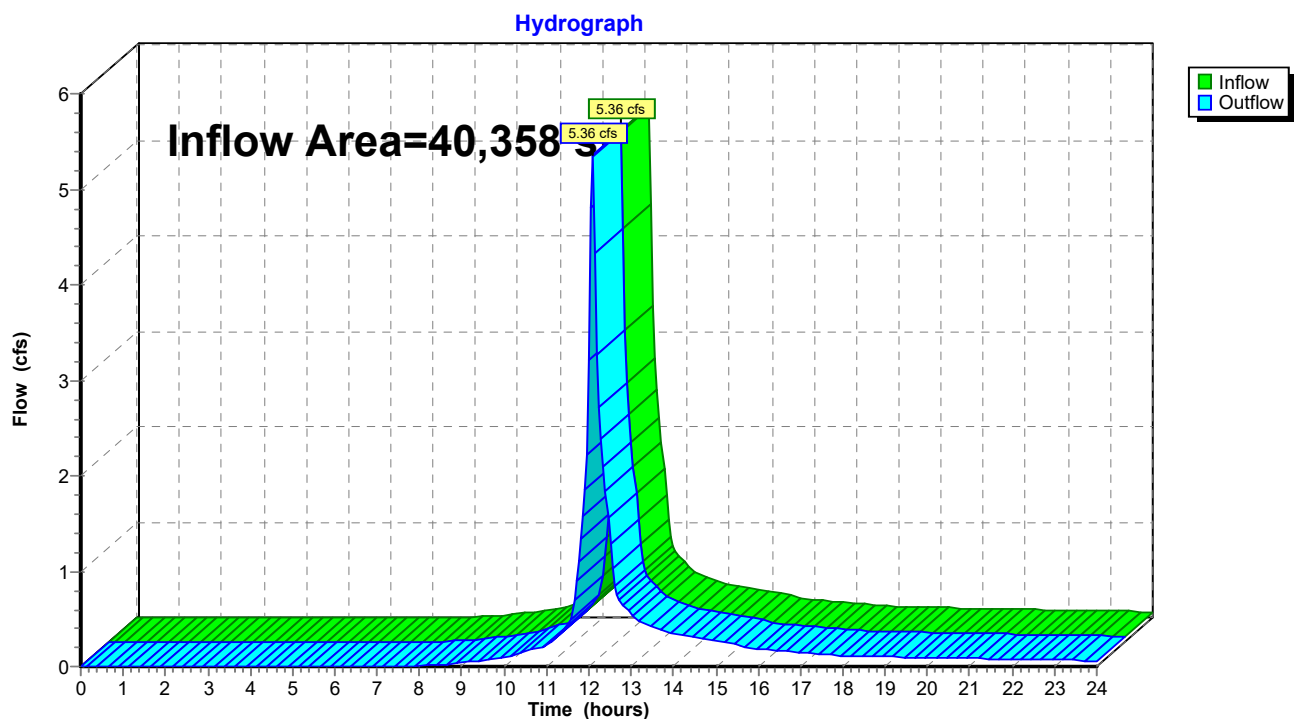
Reach DP-1: Design Point 1

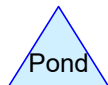
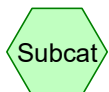
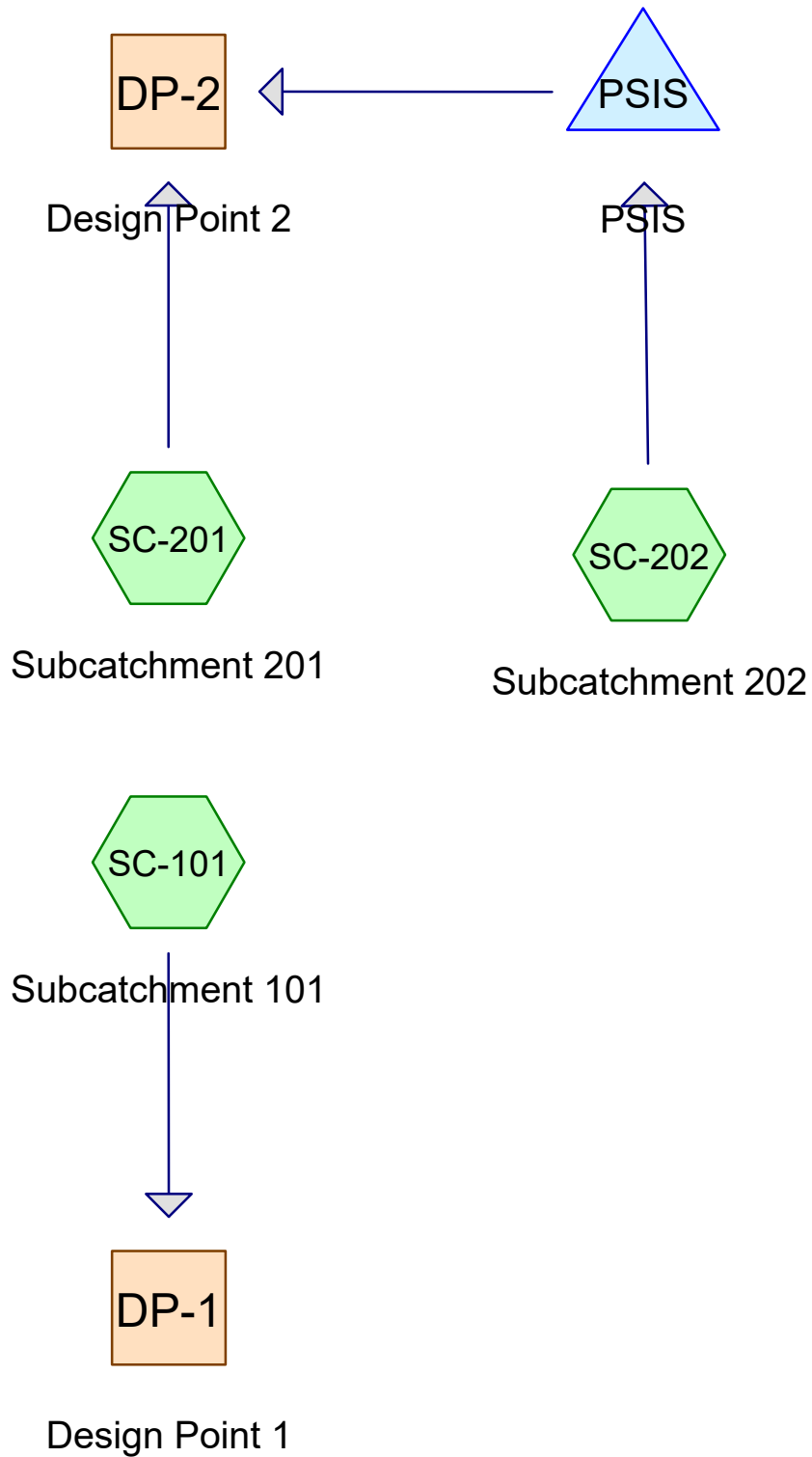
Summary for Reach DP-2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 40,358 sf, 32.82% Impervious, Inflow Depth > 5.03" for 100-Yr 24 Hr event
Inflow = 5.36 cfs @ 12.09 hrs, Volume= 16,926 cf
Outflow = 5.36 cfs @ 12.09 hrs, Volume= 16,926 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Design Point 2



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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
6,413	39	>75% Grass cover, Good, HSG A (SC-101, SC-201)
8,361	80	>75% Grass cover, Good, HSG D (SC-201)
1,434	98	Proposed Driveway/Walkway (SC-101)
25,071	98	Proposed Roof Area (SC-202)
1,026	98	Proposed Walkway/Steps (SC-201)
4,793	77	Woods, Good, HSG D (SC-201)

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Post-Construction
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentSC-101: Subcatchment101 Runoff Area=2,795 sf 51.31% Impervious Runoff Depth>0.78"
Tc=6.0 min CN=69 Runoff=0.05 cfs 181 cf

SubcatchmentSC-201: Subcatchment201 Runoff Area=19,232 sf 5.33% Impervious Runoff Depth>0.78"
Tc=6.0 min CN=69 Runoff=0.35 cfs 1,248 cf

SubcatchmentSC-202: Subcatchment202 Runoff Area=25,071 sf 100.00% Impervious Runoff Depth>2.97"
Tc=6.0 min CN=98 Runoff=1.75 cfs 6,196 cf

Reach DP-1: Design Point 1 Inflow=0.05 cfs 181 cf
Outflow=0.05 cfs 181 cf

Reach DP-2: Design Point 2 Inflow=0.35 cfs 1,248 cf
Outflow=0.35 cfs 1,248 cf

Pond PSIS: PSIS Peak Elev=86.93' Storage=2,332 cf Inflow=1.75 cfs 6,196 cf
Discarded=0.14 cfs 6,192 cf Primary=0.00 cfs 0 cf Outflow=0.14 cfs 6,192 cf

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Post-Construction
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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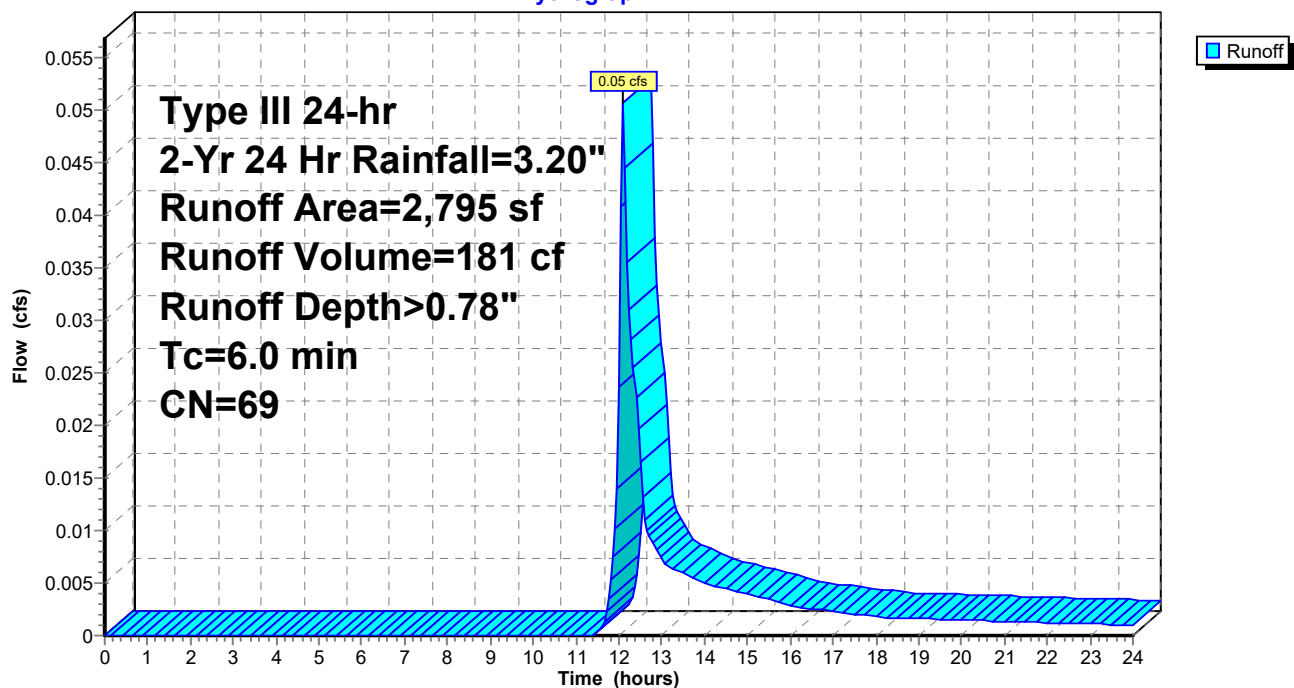
Summary for Subcatchment SC-101: Subcatchment 101

Runoff = 0.05 cfs @ 12.11 hrs, Volume= 181 cf, Depth> 0.78"
 Routed to Reach DP-1 : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
1,361	39	>75% Grass cover, Good, HSG A
* 1,434	98	Proposed Driveway/Walkway
2,795	69	Weighted Average
1,361		48.69% Pervious Area
1,434		51.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-101: Subcatchment 101**Hydrograph**

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Post-Construction

Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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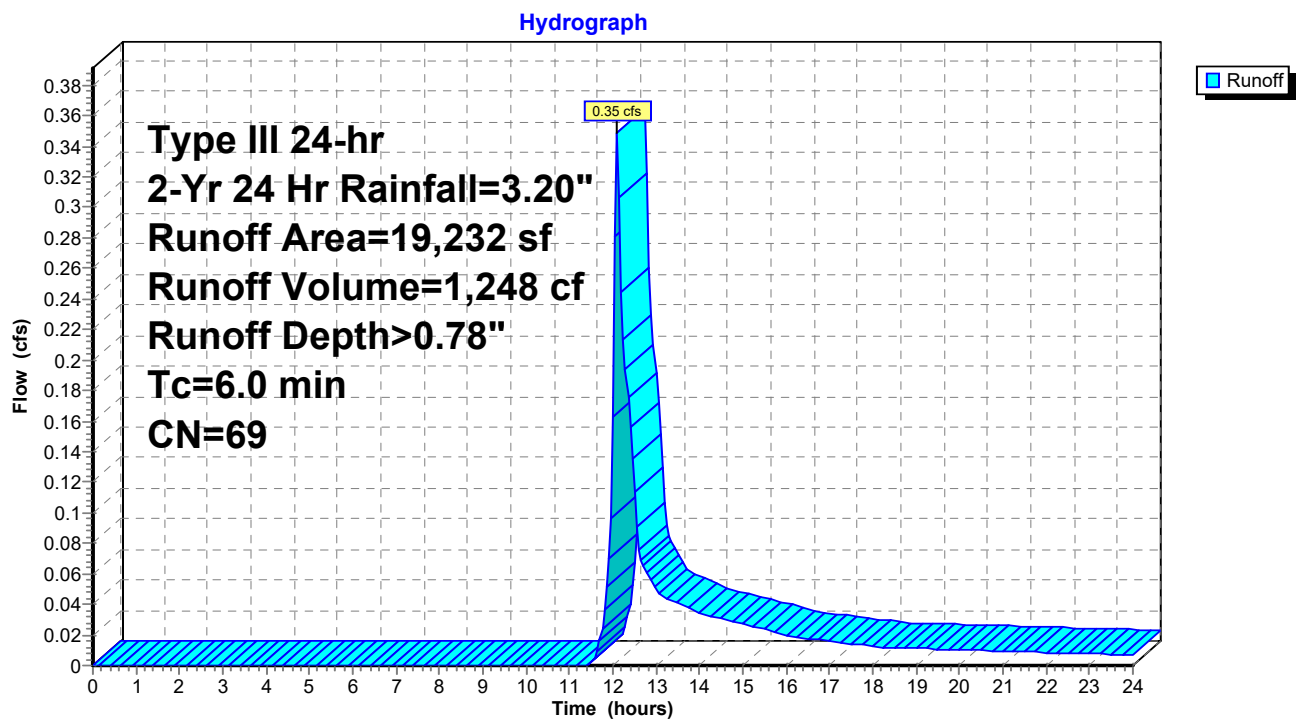
Summary for Subcatchment SC-201: Subcatchment 201

Runoff = 0.35 cfs @ 12.11 hrs, Volume= 1,248 cf, Depth> 0.78"
Routed to Reach DP-2 : Design Point 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

Area (sf)	CN	Description
5,052	39	>75% Grass cover, Good, HSG A
4,793	77	Woods, Good, HSG D
8,361	80	>75% Grass cover, Good, HSG D
* 1,026	98	Proposed Walkway/Steps
19,232	69	Weighted Average
18,206		94.67% Pervious Area
1,026		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-201: Subcatchment 201

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Post-Construction

Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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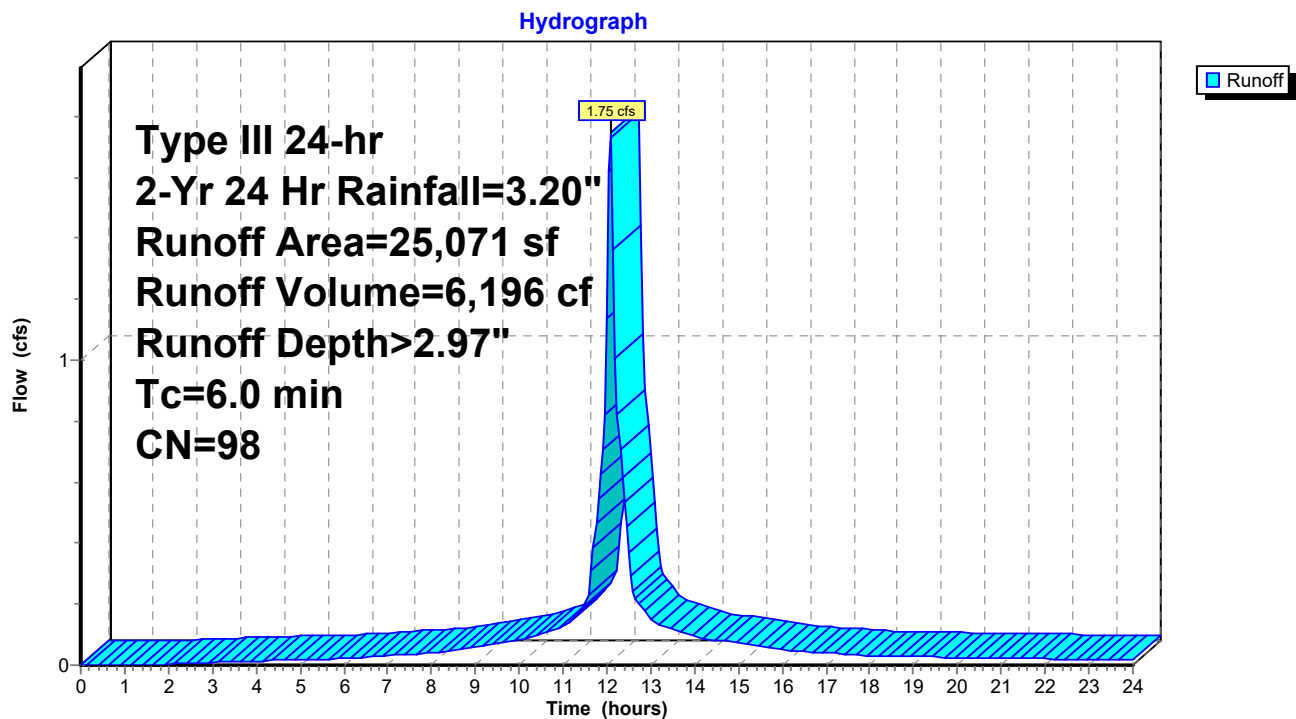
Summary for Subcatchment SC-202: Subcatchment 202

Runoff = 1.75 cfs @ 12.09 hrs, Volume= 6,196 cf, Depth> 2.97"
Routed to Pond PSIS : PSIS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

	Area (sf)	CN	Description
*	25,071	98	Proposed Roof Area
	25,071		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-202: Subcatchment 202

Summary for Reach DP-1: Design Point 1

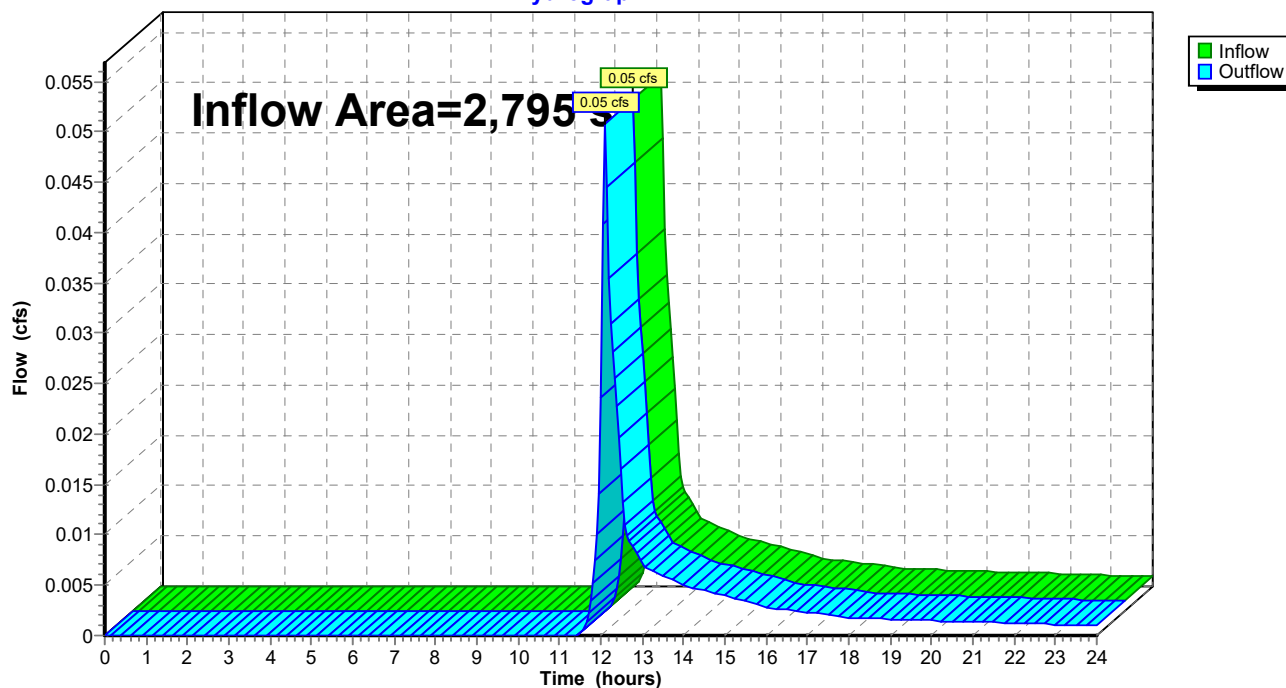
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,795 sf, 51.31% Impervious, Inflow Depth > 0.78" for 2-Yr 24 Hr event
 Inflow = 0.05 cfs @ 12.11 hrs, Volume= 181 cf
 Outflow = 0.05 cfs @ 12.11 hrs, Volume= 181 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1

Hydrograph



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Post-Construction
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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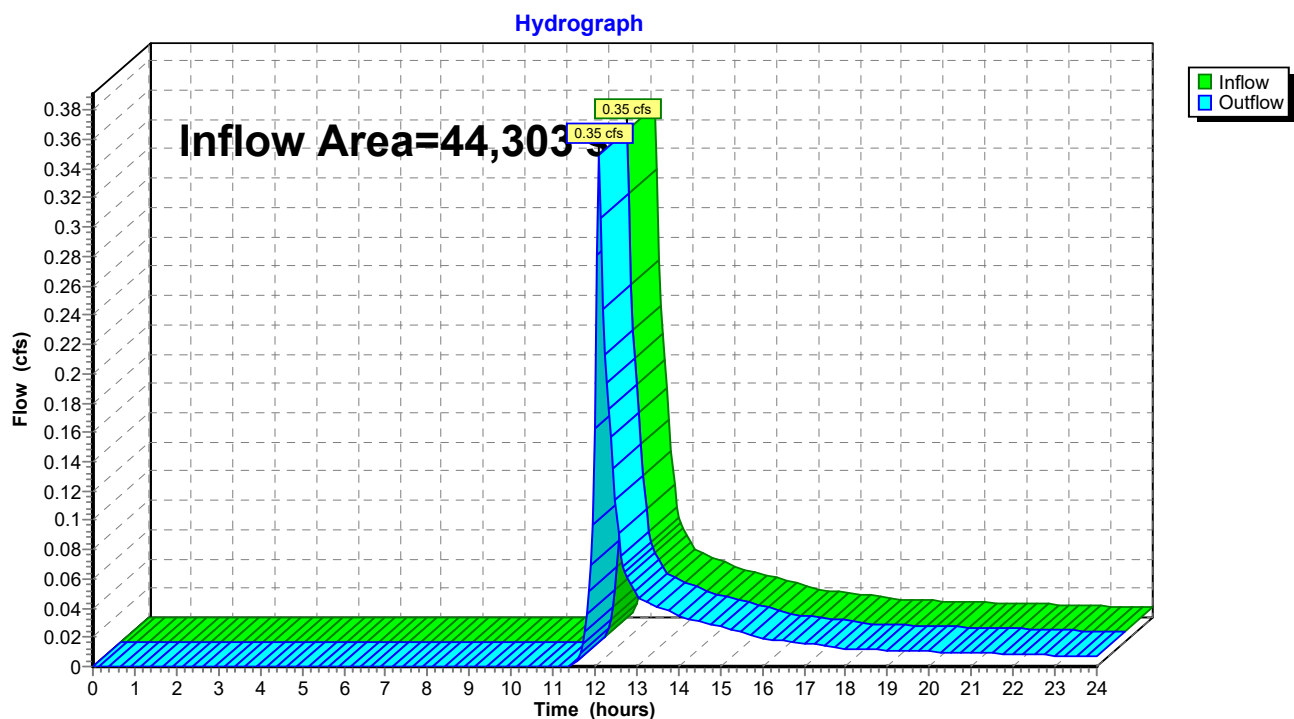
Summary for Reach DP-2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,303 sf, 58.91% Impervious, Inflow Depth > 0.34" for 2-Yr 24 Hr event
Inflow = 0.35 cfs @ 12.11 hrs, Volume= 1,248 cf
Outflow = 0.35 cfs @ 12.11 hrs, Volume= 1,248 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Design Point 2



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Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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Summary for Pond PSIS: PSIS

Inflow Area = 25,071 sf, 100.00% Impervious, Inflow Depth > 2.97" for 2-Yr 24 Hr event
 Inflow = 1.75 cfs @ 12.09 hrs, Volume= 6,196 cf
 Outflow = 0.14 cfs @ 11.20 hrs, Volume= 6,192 cf, Atten= 92%, Lag= 0.0 min
 Discarded = 0.14 cfs @ 11.20 hrs, Volume= 6,192 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Routed to Reach DP-2 : Design Point 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 86.93' @ 13.10 hrs Surf.Area= 2,458 sf Storage= 2,332 cf

Plug-Flow detention time= 126.2 min calculated for 6,192 cf (100% of inflow)
 Center-of-Mass det. time= 125.7 min (881.7 - 756.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	85.50'	2,221 cf	30.00'W x 81.94'L x 3.50'H Field A 8,603 cf Overall - 3,052 cf Embedded = 5,552 cf x 40.0% Voids
#2A	86.00'	3,052 cf	ADS_StormTech RC-750 +Cap x 66 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 66 Chambers in 6 Rows
		5,272 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.50'	2.410 in/hr Exfiltration over Surface area
#2	Primary	87.90'	6.0" Vert. Orifice/Grate X 4.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.14 cfs @ 11.20 hrs HW=85.54' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=85.50' (Free Discharge)
 ↑ **2=Orifice/Grate** (Controls 0.00 cfs)

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Pond PSIS: PSIS - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-750 +Cap (ADS StormTech®RC-750 with cap length)

Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 79.94' Row Length +12.0" End Stone x 2 = 81.94' Base Length

6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

66 Chambers x 46.2 cf = 3,051.8 cf Chamber Storage

8,603.4 cf Field - 3,051.8 cf Chambers = 5,551.6 cf Stone x 40.0% Voids = 2,220.6 cf Stone Storage

Chamber Storage + Stone Storage = 5,272.4 cf = 0.121 af

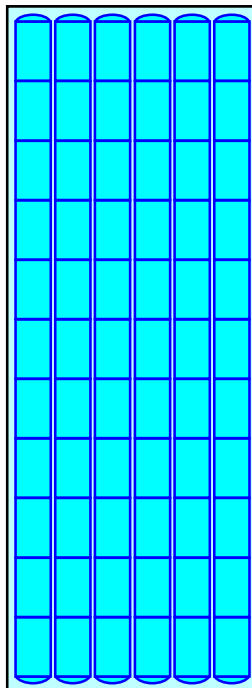
Overall Storage Efficiency = 61.3%

Overall System Size = 81.94' x 30.00' x 3.50'

66 Chambers

318.6 cy Field

205.6 cy Stone



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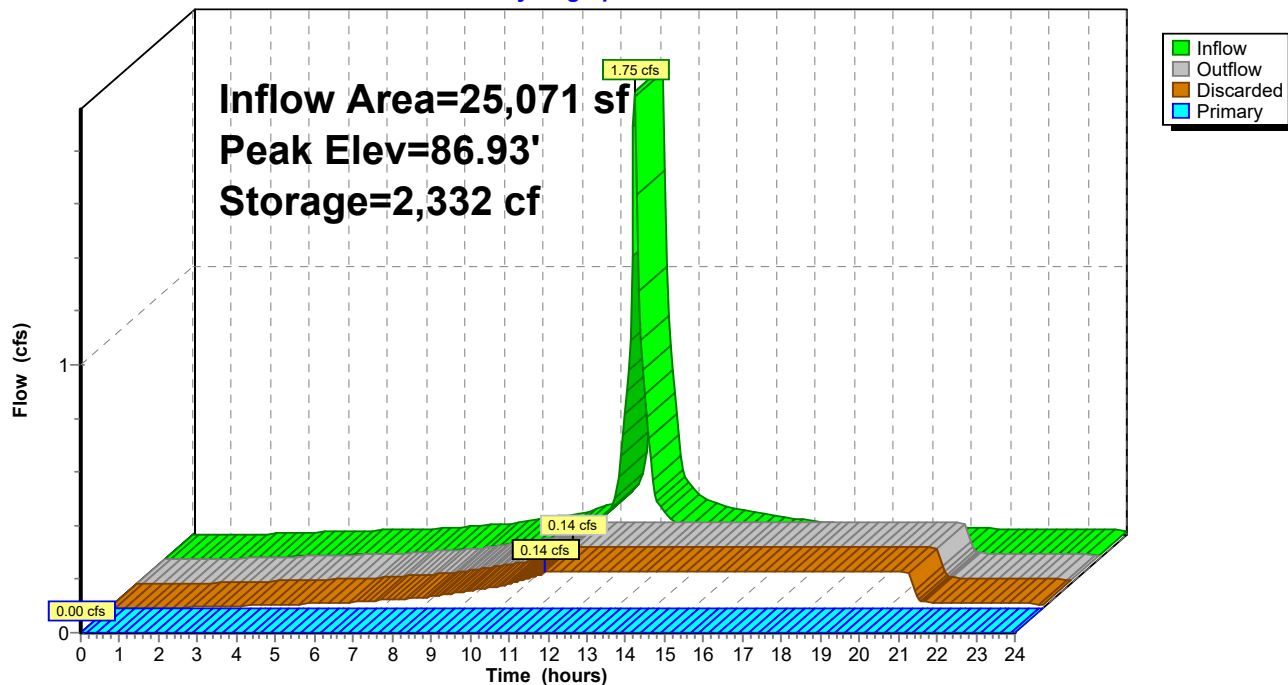
Post-Construction
Type III 24-hr 2-Yr 24 Hr Rainfall=3.20"

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Pond PSIS: PSIS

Hydrograph



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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentSC-101: Subcatchment101 Runoff Area=2,795 sf 51.31% Impervious Runoff Depth>1.81"
Tc=6.0 min CN=69 Runoff=0.13 cfs 422 cf

SubcatchmentSC-201: Subcatchment201 Runoff Area=19,232 sf 5.33% Impervious Runoff Depth>1.81"
Tc=6.0 min CN=69 Runoff=0.90 cfs 2,903 cf

SubcatchmentSC-202: Subcatchment202 Runoff Area=25,071 sf 100.00% Impervious Runoff Depth>4.56"
Tc=6.0 min CN=98 Runoff=2.64 cfs 9,528 cf

Reach DP-1: Design Point 1 Inflow=0.13 cfs 422 cf
Outflow=0.13 cfs 422 cf

Reach DP-2: Design Point 2 Inflow=0.90 cfs 3,079 cf
Outflow=0.90 cfs 3,079 cf

Pond PSIS: PSIS Peak Elev=87.96' Storage=4,116 cf Inflow=2.64 cfs 9,528 cf
Discarded=0.14 cfs 8,308 cf Primary=0.05 cfs 177 cf Outflow=0.19 cfs 8,485 cf

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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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Summary for Subcatchment SC-101: Subcatchment 101

Runoff = 0.13 cfs @ 12.10 hrs, Volume= 422 cf, Depth> 1.81"
 Routed to Reach DP-1 : Design Point 1

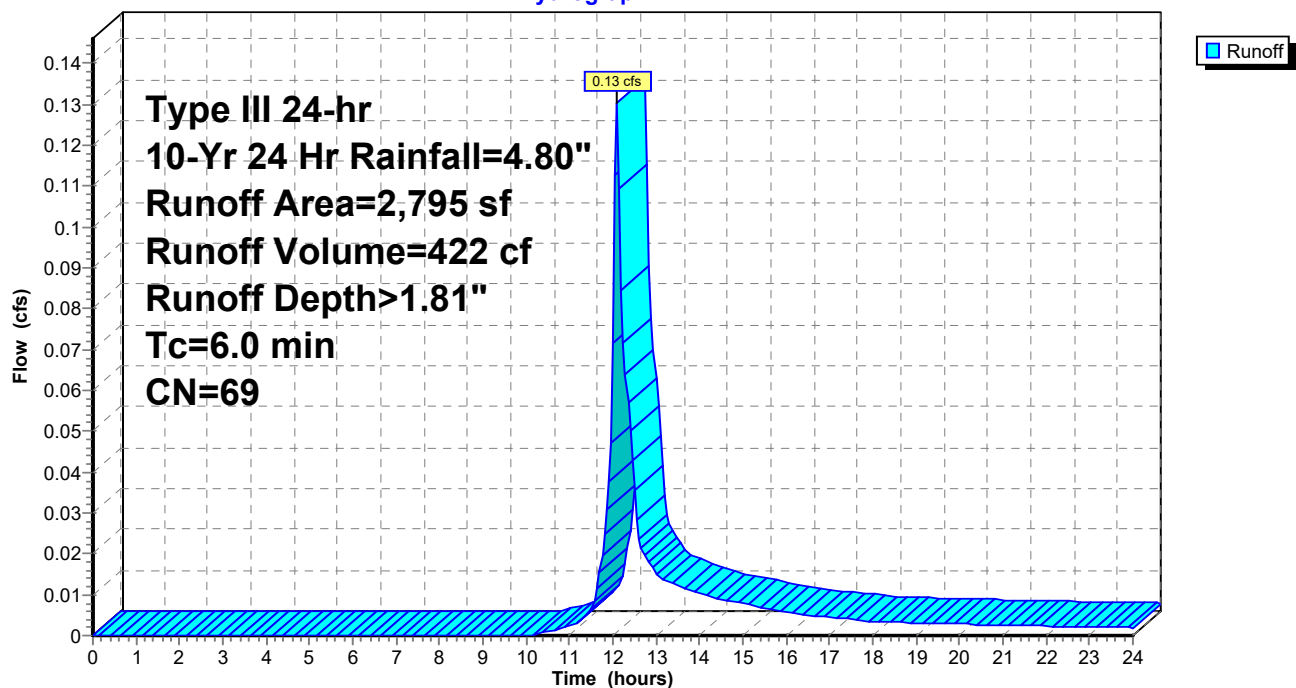
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
1,361	39	>75% Grass cover, Good, HSG A
* 1,434	98	Proposed Driveway/Walkway
2,795	69	Weighted Average
1,361		48.69% Pervious Area
1,434		51.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-101: Subcatchment 101

Hydrograph



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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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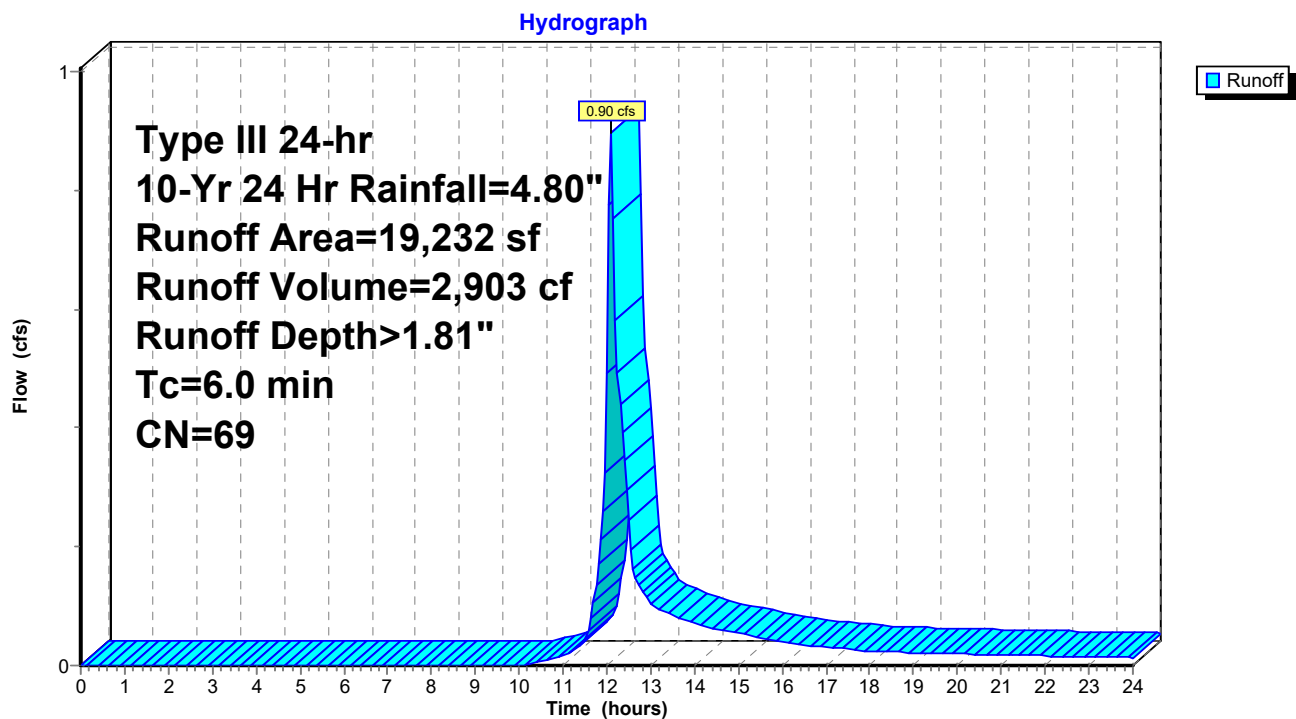
Summary for Subcatchment SC-201: Subcatchment 201

Runoff = 0.90 cfs @ 12.10 hrs, Volume= 2,903 cf, Depth> 1.81"
 Routed to Reach DP-2 : Design Point 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

Area (sf)	CN	Description
5,052	39	>75% Grass cover, Good, HSG A
4,793	77	Woods, Good, HSG D
8,361	80	>75% Grass cover, Good, HSG D
* 1,026	98	Proposed Walkway/Steps
19,232	69	Weighted Average
18,206		94.67% Pervious Area
1,026		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-201: Subcatchment 201

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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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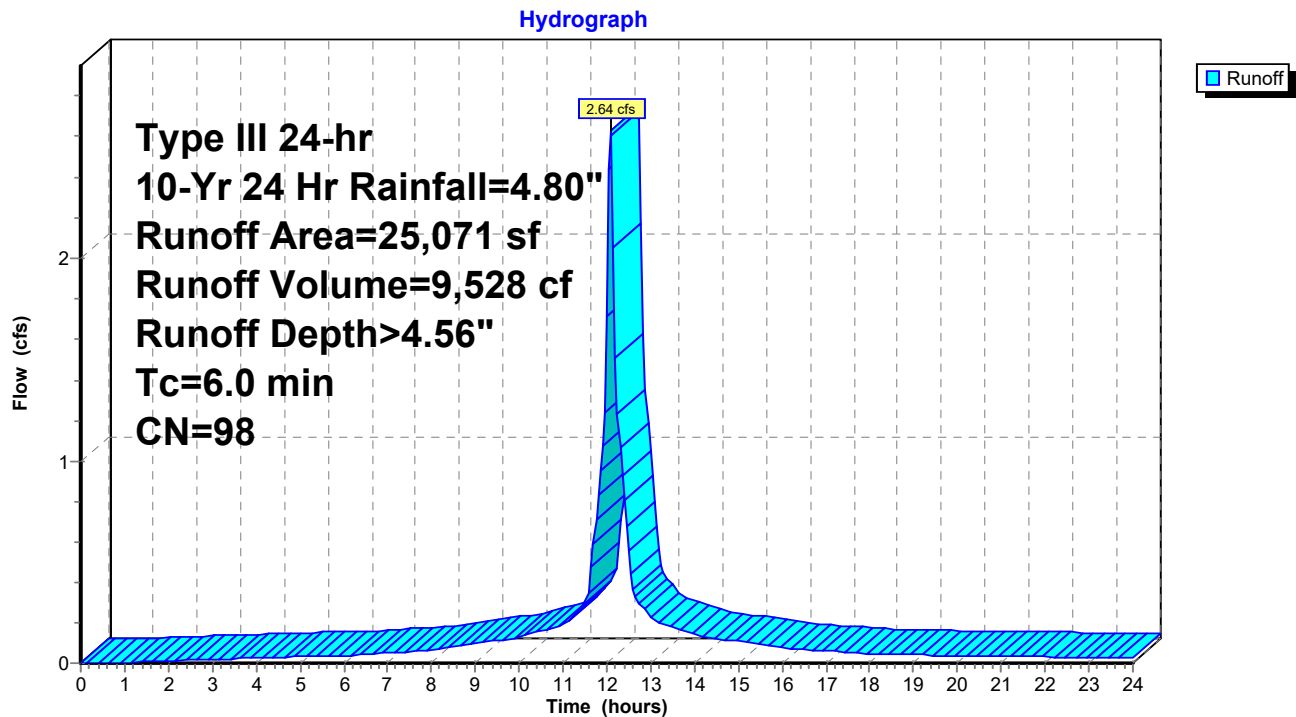
Summary for Subcatchment SC-202: Subcatchment 202

Runoff = 2.64 cfs @ 12.09 hrs, Volume= 9,528 cf, Depth> 4.56"
Routed to Pond PSIS : PSIS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

	Area (sf)	CN	Description
*	25,071	98	Proposed Roof Area
	25,071		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-202: Subcatchment 202

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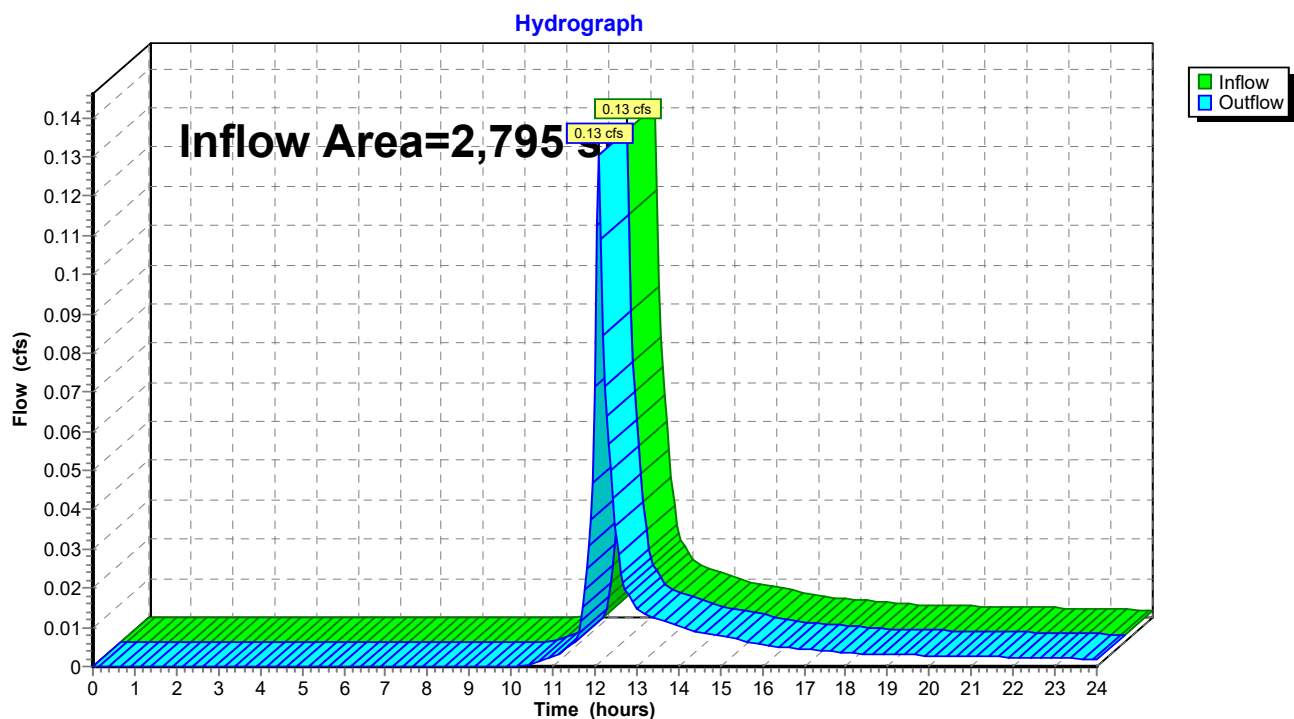
Summary for Reach DP-1: Design Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,795 sf, 51.31% Impervious, Inflow Depth > 1.81" for 10-Yr 24 Hr event
Inflow = 0.13 cfs @ 12.10 hrs, Volume= 422 cf
Outflow = 0.13 cfs @ 12.10 hrs, Volume= 422 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1



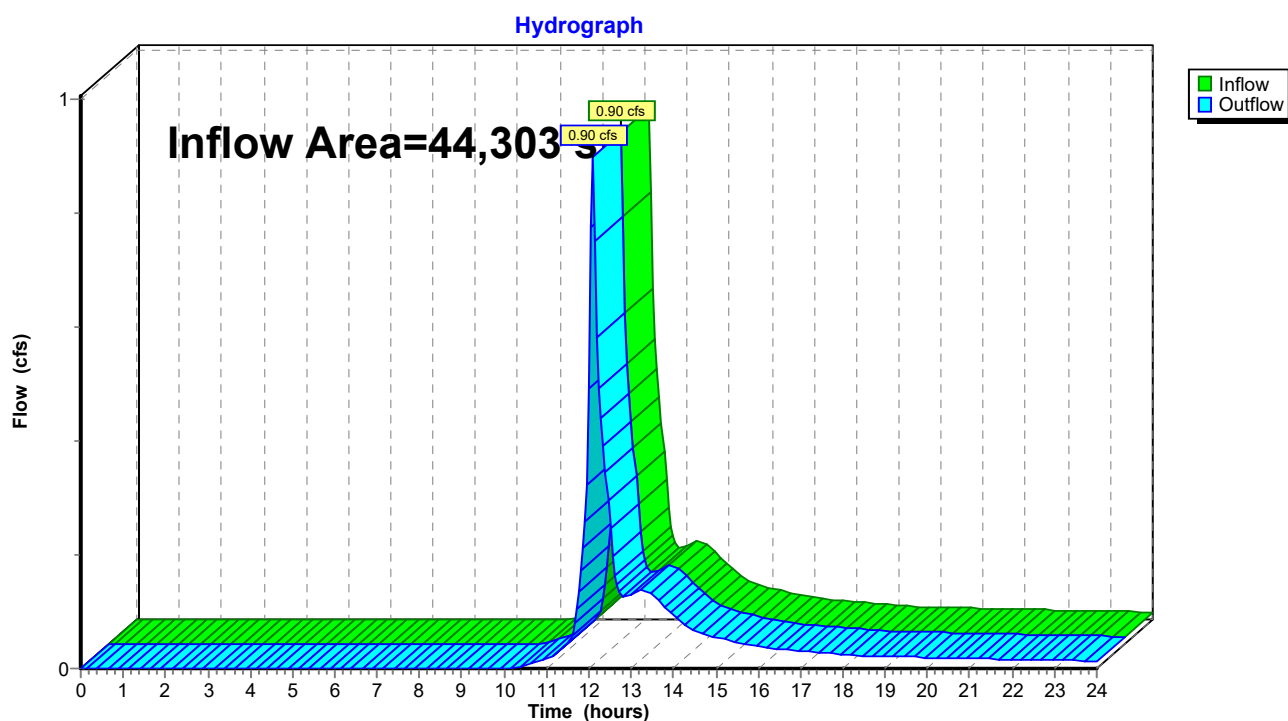
Summary for Reach DP-2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,303 sf, 58.91% Impervious, Inflow Depth > 0.83" for 10-Yr 24 Hr event
Inflow = 0.90 cfs @ 12.10 hrs, Volume= 3,079 cf
Outflow = 0.90 cfs @ 12.10 hrs, Volume= 3,079 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Design Point 2



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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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Summary for Pond PSIS: PSIS

Inflow Area = 25,071 sf, 100.00% Impervious, Inflow Depth > 4.56" for 10-Yr 24 Hr event
 Inflow = 2.64 cfs @ 12.09 hrs, Volume= 9,528 cf
 Outflow = 0.19 cfs @ 13.35 hrs, Volume= 8,485 cf, Atten= 93%, Lag= 76.0 min
 Discarded = 0.14 cfs @ 10.25 hrs, Volume= 8,308 cf
 Primary = 0.05 cfs @ 13.35 hrs, Volume= 177 cf
 Routed to Reach DP-2 : Design Point 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 87.96' @ 13.35 hrs Surf.Area= 2,458 sf Storage= 4,116 cf

Plug-Flow detention time= 226.3 min calculated for 8,485 cf (89% of inflow)
 Center-of-Mass det. time= 173.3 min (921.6 - 748.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	85.50'	2,221 cf	30.00'W x 81.94'L x 3.50'H Field A 8,603 cf Overall - 3,052 cf Embedded = 5,552 cf x 40.0% Voids
#2A	86.00'	3,052 cf	ADS_StormTech RC-750 +Cap x 66 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 66 Chambers in 6 Rows
		5,272 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.50'	2.410 in/hr Exfiltration over Surface area
#2	Primary	87.90'	6.0" Vert. Orifice/Grate X 4.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.14 cfs @ 10.25 hrs HW=85.54' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.05 cfs @ 13.35 hrs HW=87.96' (Free Discharge)
 ↑ **2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 0.84 fps)

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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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Pond PSIS: PSIS - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-750 +Cap (ADS StormTech®RC-750 with cap length)

Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 79.94' Row Length +12.0" End Stone x 2 = 81.94' Base Length

6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

66 Chambers x 46.2 cf = 3,051.8 cf Chamber Storage

8,603.4 cf Field - 3,051.8 cf Chambers = 5,551.6 cf Stone x 40.0% Voids = 2,220.6 cf Stone Storage

Chamber Storage + Stone Storage = 5,272.4 cf = 0.121 af

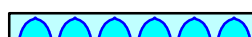
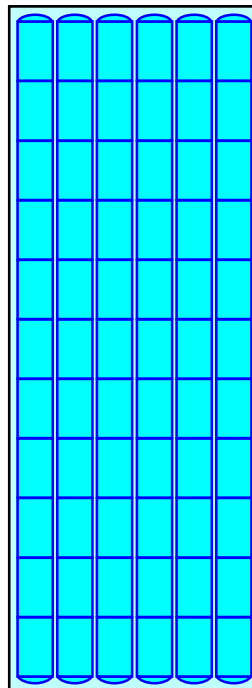
Overall Storage Efficiency = 61.3%

Overall System Size = 81.94' x 30.00' x 3.50'

66 Chambers

318.6 cy Field

205.6 cy Stone



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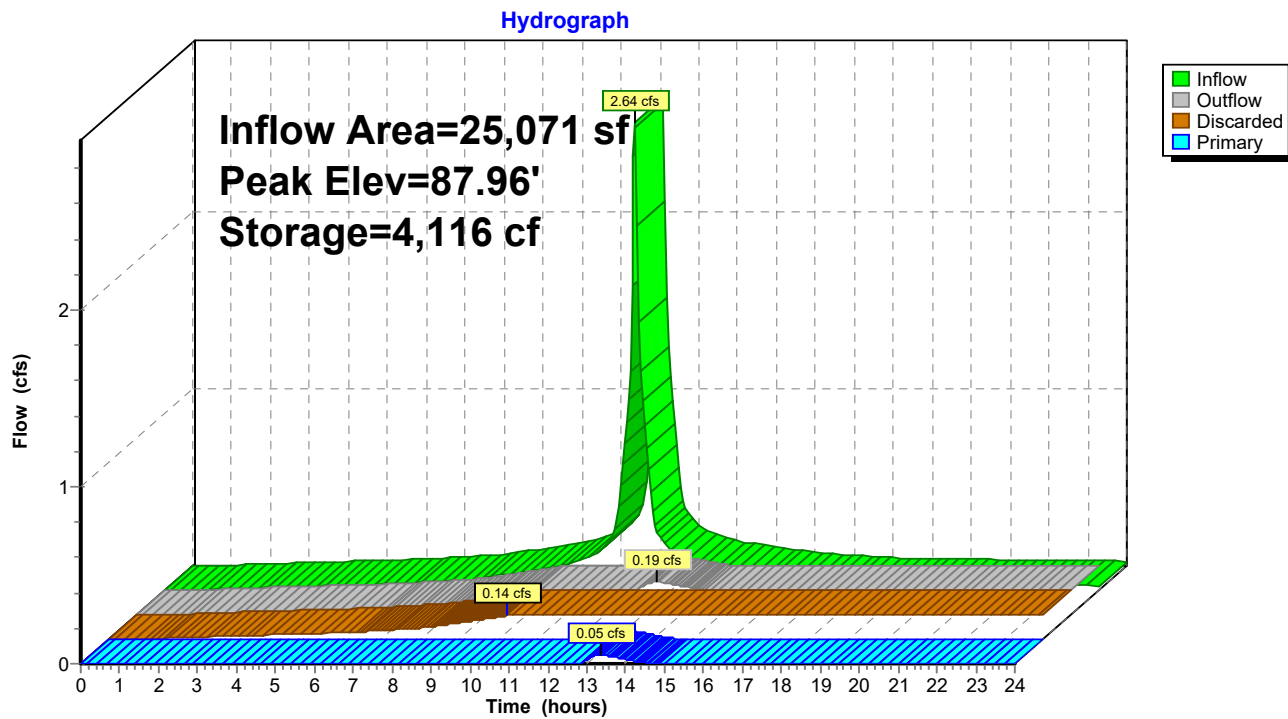
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Type III 24-hr 10-Yr 24 Hr Rainfall=4.80"

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Pond PSIS: PSIS



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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentSC-101: Subcatchment101 Runoff Area=2,795 sf 51.31% Impervious Runoff Depth>3.59"
Tc=6.0 min CN=69 Runoff=0.27 cfs 837 cf

SubcatchmentSC-201: Subcatchment201 Runoff Area=19,232 sf 5.33% Impervious Runoff Depth>3.59"
Tc=6.0 min CN=69 Runoff=1.82 cfs 5,758 cf

SubcatchmentSC-202: Subcatchment202 Runoff Area=25,071 sf 100.00% Impervious Runoff Depth>6.86"
Tc=6.0 min CN=98 Runoff=3.92 cfs 14,325 cf

Reach DP-1: Design Point 1 Inflow=0.27 cfs 837 cf
Outflow=0.27 cfs 837 cf

Reach DP-2: Design Point 2 Inflow=2.92 cfs 9,238 cf
Outflow=2.92 cfs 9,238 cf

Pond PSIS: PSIS Peak Elev=88.38' Storage=4,659 cf Inflow=3.92 cfs 14,325 cf
Discarded=0.14 cfs 9,055 cf Primary=1.83 cfs 3,480 cf Outflow=1.96 cfs 12,534 cf

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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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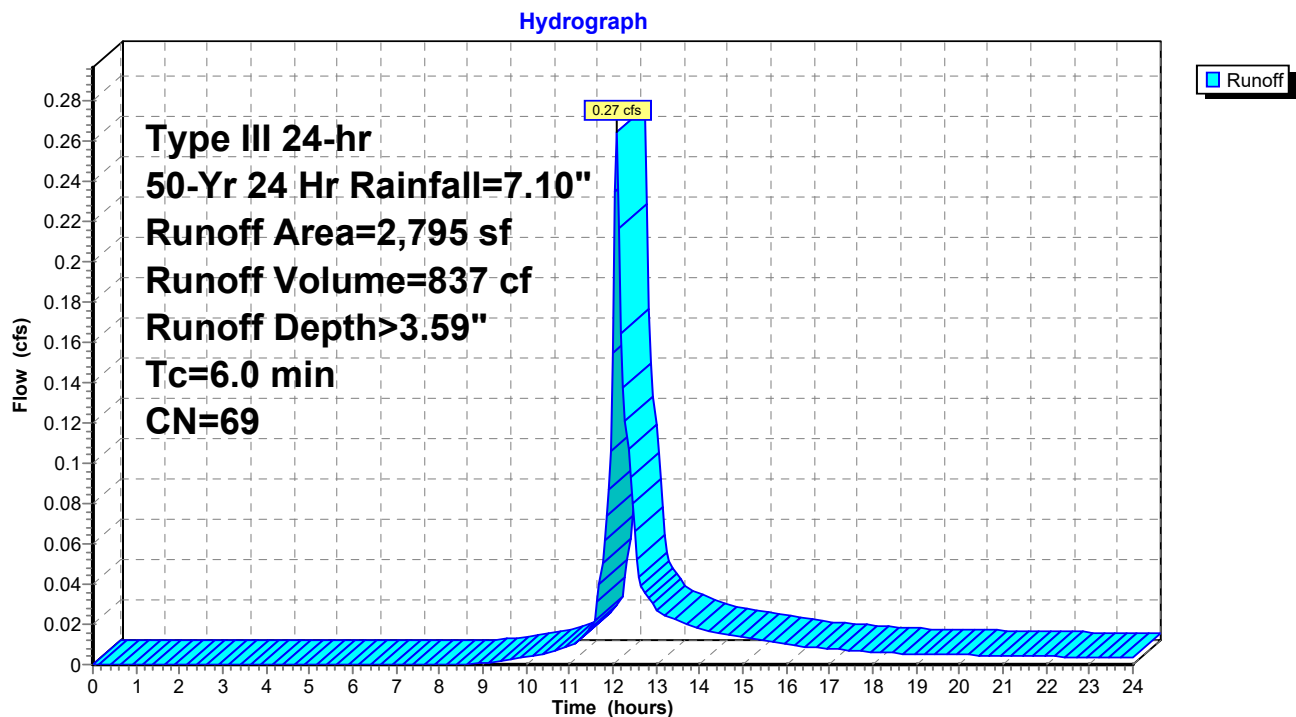
Summary for Subcatchment SC-101: Subcatchment 101

Runoff = 0.27 cfs @ 12.09 hrs, Volume= 837 cf, Depth> 3.59"
Routed to Reach DP-1 : Design Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Area (sf)	CN	Description
1,361	39	>75% Grass cover, Good, HSG A
* 1,434	98	Proposed Driveway/Walkway
2,795	69	Weighted Average
1,361		48.69% Pervious Area
1,434		51.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-101: Subcatchment 101

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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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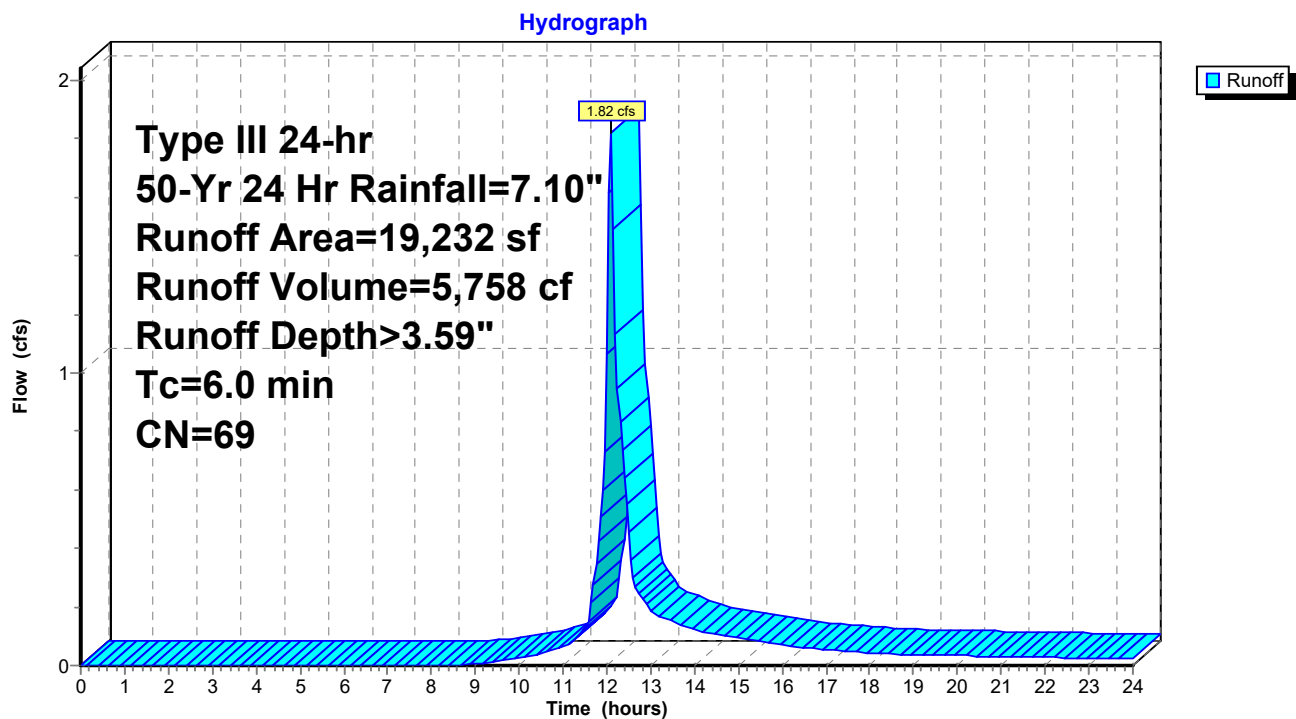
Summary for Subcatchment SC-201: Subcatchment 201

Runoff = 1.82 cfs @ 12.09 hrs, Volume= 5,758 cf, Depth> 3.59"
 Routed to Reach DP-2 : Design Point 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

Area (sf)	CN	Description
5,052	39	>75% Grass cover, Good, HSG A
4,793	77	Woods, Good, HSG D
8,361	80	>75% Grass cover, Good, HSG D
* 1,026	98	Proposed Walkway/Steps
19,232	69	Weighted Average
18,206		94.67% Pervious Area
1,026		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-201: Subcatchment 201

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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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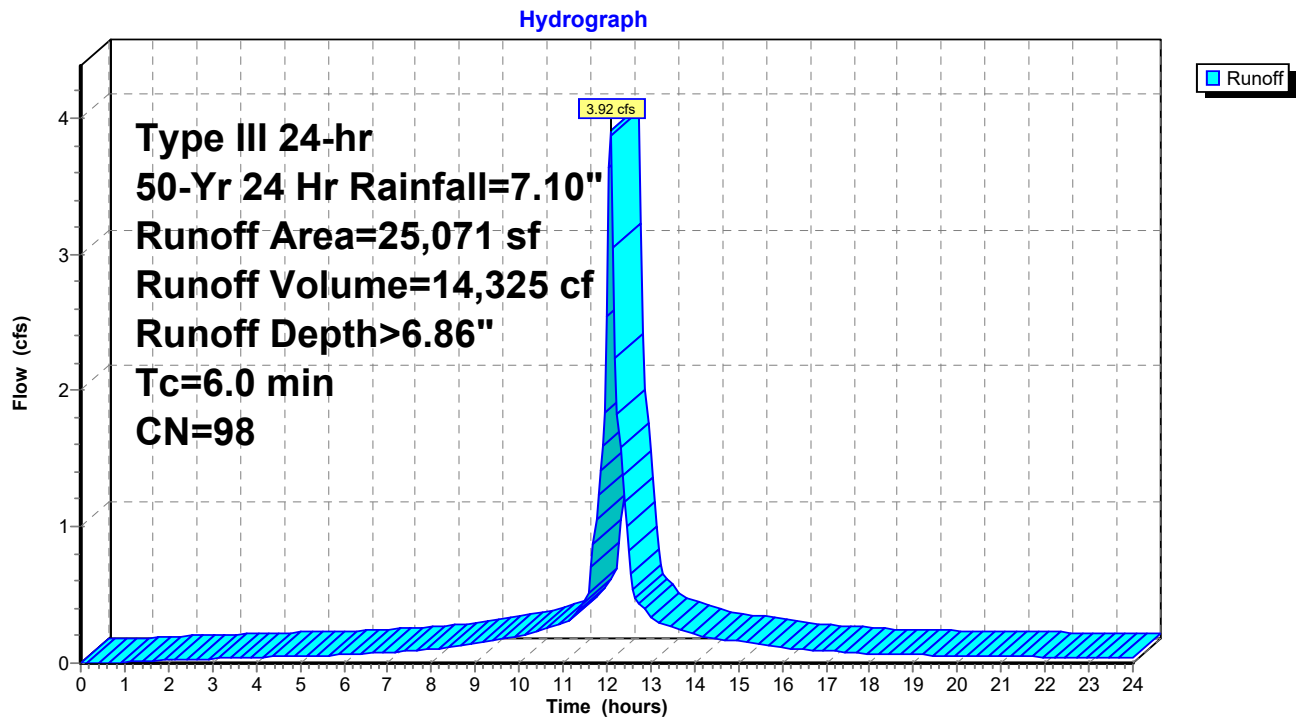
Summary for Subcatchment SC-202: Subcatchment 202

Runoff = 3.92 cfs @ 12.09 hrs, Volume= 14,325 cf, Depth> 6.86"
Routed to Pond PSIS : PSIS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

	Area (sf)	CN	Description
*	25,071	98	Proposed Roof Area
	25,071		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

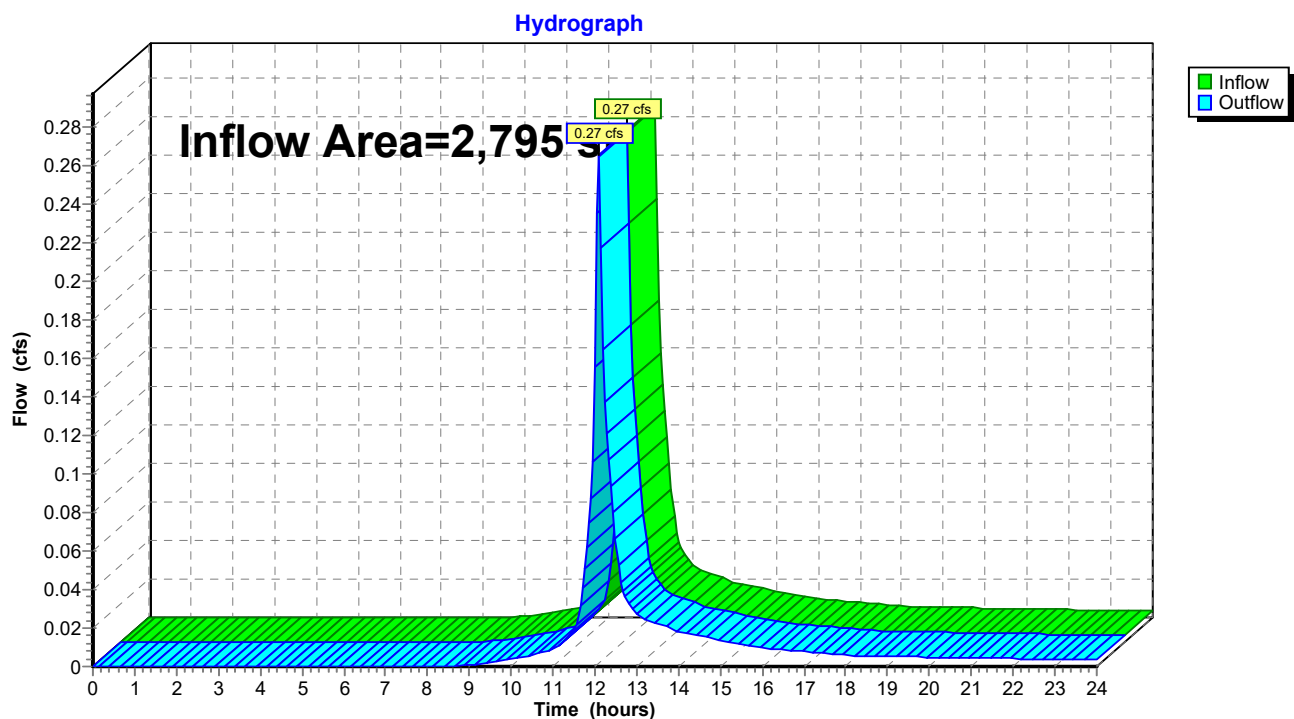
Subcatchment SC-202: Subcatchment 202

Summary for Reach DP-1: Design Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,795 sf, 51.31% Impervious, Inflow Depth > 3.59" for 50-Yr 24 Hr event
Inflow = 0.27 cfs @ 12.09 hrs, Volume= 837 cf
Outflow = 0.27 cfs @ 12.09 hrs, Volume= 837 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1

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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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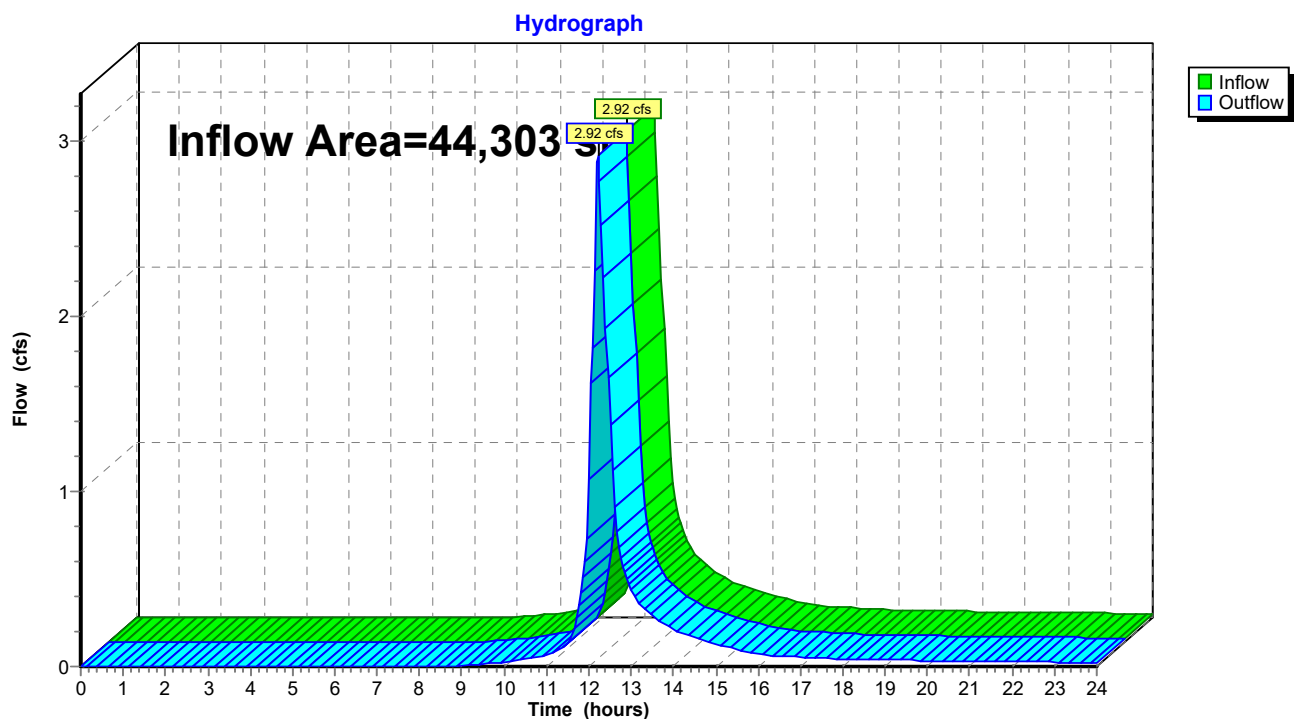
Summary for Reach DP-2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,303 sf, 58.91% Impervious, Inflow Depth > 2.50" for 50-Yr 24 Hr event
Inflow = 2.92 cfs @ 12.22 hrs, Volume= 9,238 cf
Outflow = 2.92 cfs @ 12.22 hrs, Volume= 9,238 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Design Point 2



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Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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Summary for Pond PSIS: PSIS

Inflow Area = 25,071 sf, 100.00% Impervious, Inflow Depth > 6.86" for 50-Yr 24 Hr event
 Inflow = 3.92 cfs @ 12.09 hrs, Volume= 14,325 cf
 Outflow = 1.96 cfs @ 12.24 hrs, Volume= 12,534 cf, Atten= 50%, Lag= 9.4 min
 Discarded = 0.14 cfs @ 8.90 hrs, Volume= 9,055 cf
 Primary = 1.83 cfs @ 12.24 hrs, Volume= 3,480 cf
 Routed to Reach DP-2 : Design Point 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 88.38' @ 12.24 hrs Surf.Area= 2,458 sf Storage= 4,659 cf

Plug-Flow detention time= 163.0 min calculated for 12,508 cf (87% of inflow)
 Center-of-Mass det. time= 105.4 min (847.8 - 742.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	85.50'	2,221 cf	30.00'W x 81.94'L x 3.50'H Field A 8,603 cf Overall - 3,052 cf Embedded = 5,552 cf x 40.0% Voids
#2A	86.00'	3,052 cf	ADS_StormTech RC-750 +Cap x 66 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 66 Chambers in 6 Rows
		5,272 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.50'	2.410 in/hr Exfiltration over Surface area
#2	Primary	87.90'	6.0" Vert. Orifice/Grate X 4.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.14 cfs @ 8.90 hrs HW=85.54' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=1.82 cfs @ 12.24 hrs HW=88.38' (Free Discharge)
 ↑ **2=Orifice/Grate** (Orifice Controls 1.82 cfs @ 2.35 fps)

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Post-Construction

Type III 24-hr 50-Yr 24 Hr Rainfall=7.10"

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Pond PSIS: PSIS - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-750 +Cap (ADS StormTech®RC-750 with cap length)

Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 79.94' Row Length +12.0" End Stone x 2 = 81.94' Base Length

6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

66 Chambers x 46.2 cf = 3,051.8 cf Chamber Storage

8,603.4 cf Field - 3,051.8 cf Chambers = 5,551.6 cf Stone x 40.0% Voids = 2,220.6 cf Stone Storage

Chamber Storage + Stone Storage = 5,272.4 cf = 0.121 af

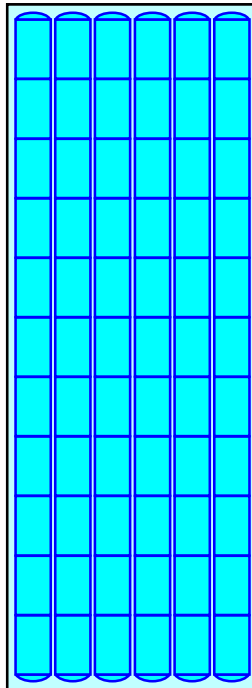
Overall Storage Efficiency = 61.3%

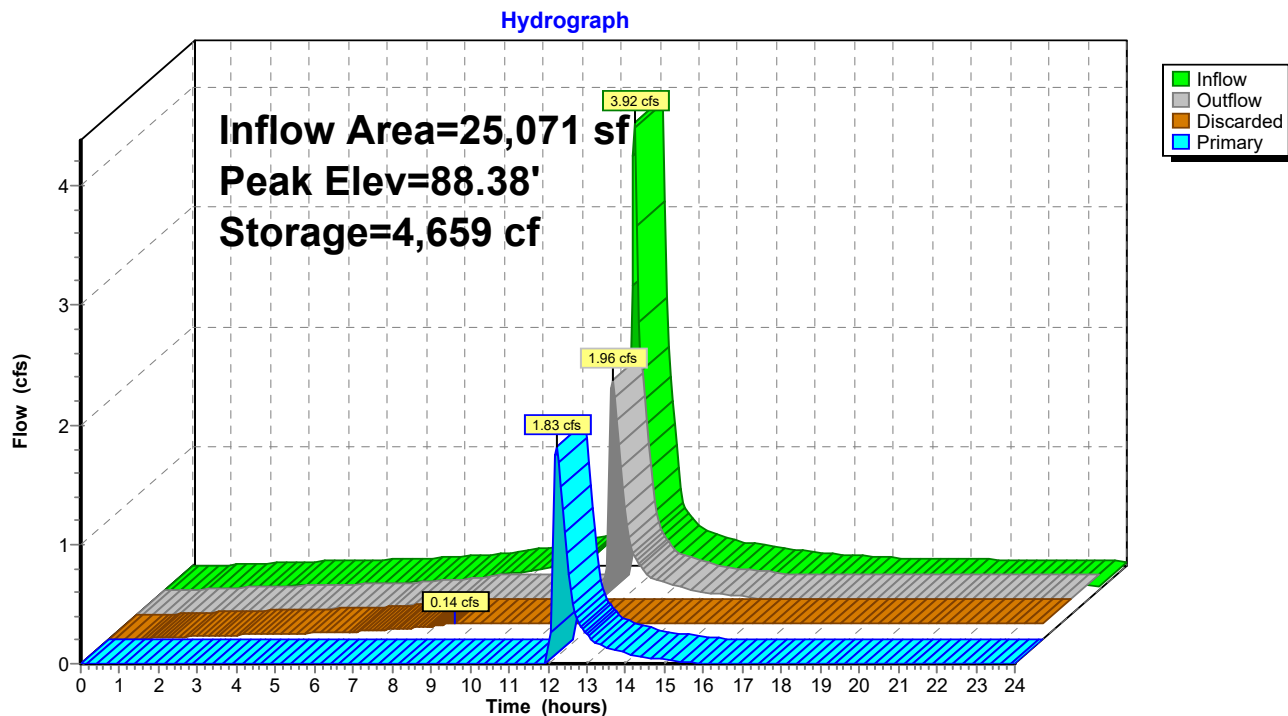
Overall System Size = 81.94' x 30.00' x 3.50'

66 Chambers

318.6 cy Field

205.6 cy Stone



Pond PSIS: PSIS

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Post-Construction
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentSC-101: Subcatchment101 Runoff Area=2,795 sf 51.31% Impervious Runoff Depth>5.03"
Tc=6.0 min CN=69 Runoff=0.37 cfs 1,172 cf

SubcatchmentSC-201: Subcatchment201 Runoff Area=19,232 sf 5.33% Impervious Runoff Depth>5.03"
Tc=6.0 min CN=69 Runoff=2.56 cfs 8,066 cf

SubcatchmentSC-202: Subcatchment202 Runoff Area=25,071 sf 100.00% Impervious Runoff Depth>8.55"
Tc=6.0 min CN=98 Runoff=4.86 cfs 17,873 cf

Reach DP-1: Design Point 1 Inflow=0.37 cfs 1,172 cf
Outflow=0.37 cfs 1,172 cf

Reach DP-2: Design Point 2 Inflow=5.28 cfs 14,222 cf
Outflow=5.28 cfs 14,222 cf

Pond PSIS: PSIS Peak Elev=88.88' Storage=5,157 cf Inflow=4.86 cfs 17,873 cf
Discarded=0.14 cfs 9,488 cf Primary=3.24 cfs 6,156 cf Outflow=3.38 cfs 15,644 cf

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Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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Summary for Subcatchment SC-101: Subcatchment 101

Runoff = 0.37 cfs @ 12.09 hrs, Volume= 1,172 cf, Depth> 5.03"
 Routed to Reach DP-1 : Design Point 1

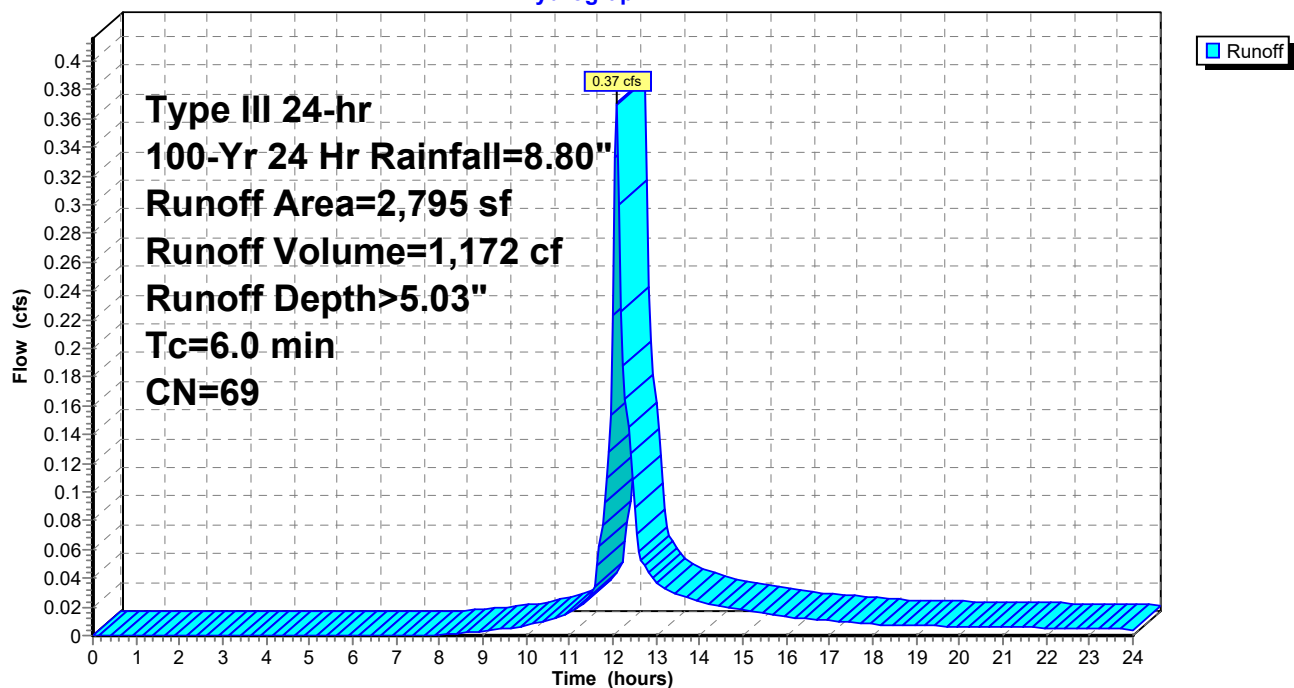
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
1,361	39	>75% Grass cover, Good, HSG A
* 1,434	98	Proposed Driveway/Walkway
2,795	69	Weighted Average
1,361		48.69% Pervious Area
1,434		51.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-101: Subcatchment 101

Hydrograph



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Post-Construction

Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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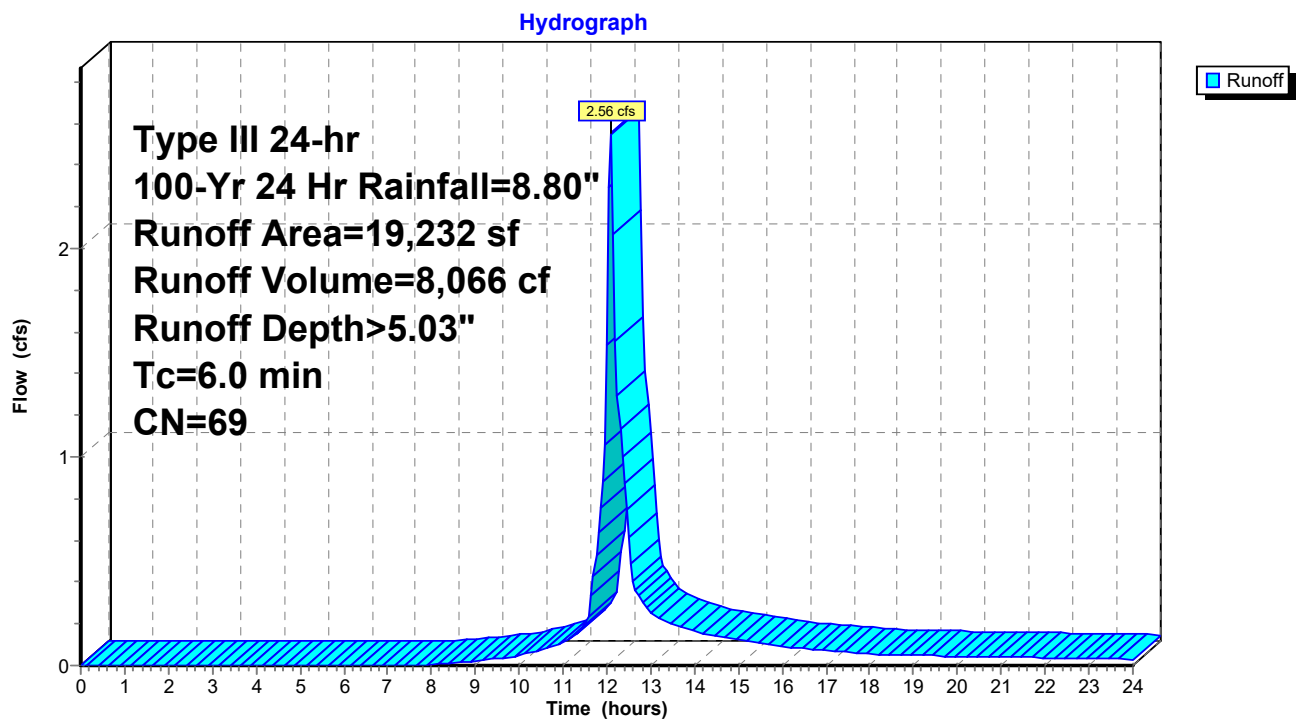
Summary for Subcatchment SC-201: Subcatchment 201

Runoff = 2.56 cfs @ 12.09 hrs, Volume= 8,066 cf, Depth> 5.03"
 Routed to Reach DP-2 : Design Point 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

Area (sf)	CN	Description
5,052	39	>75% Grass cover, Good, HSG A
4,793	77	Woods, Good, HSG D
8,361	80	>75% Grass cover, Good, HSG D
* 1,026	98	Proposed Walkway/Steps
19,232	69	Weighted Average
18,206		94.67% Pervious Area
1,026		5.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-201: Subcatchment 201

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Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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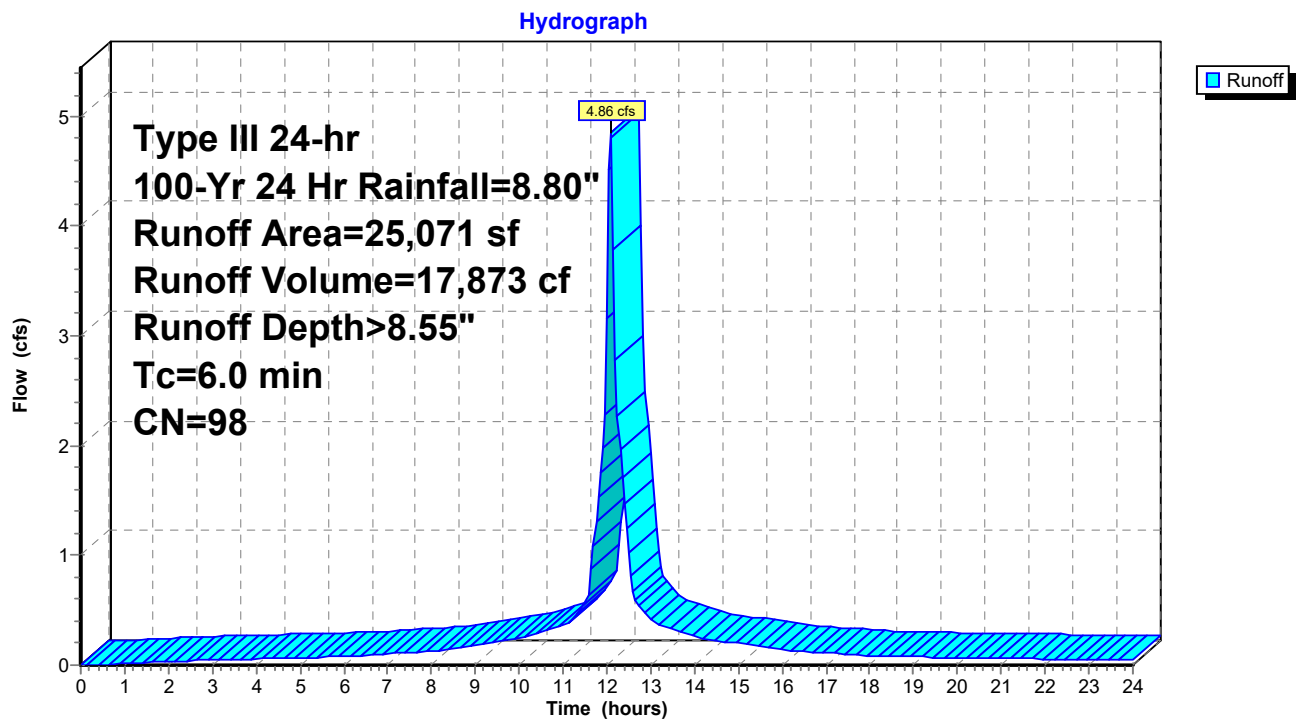
Summary for Subcatchment SC-202: Subcatchment 202

Runoff = 4.86 cfs @ 12.09 hrs, Volume= 17,873 cf, Depth> 8.55"
Routed to Pond PSIS : PSIS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

	Area (sf)	CN	Description
*	25,071	98	Proposed Roof Area
	25,071		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min. Engineering Standard

Subcatchment SC-202: Subcatchment 202

Summary for Reach DP-1: Design Point 1

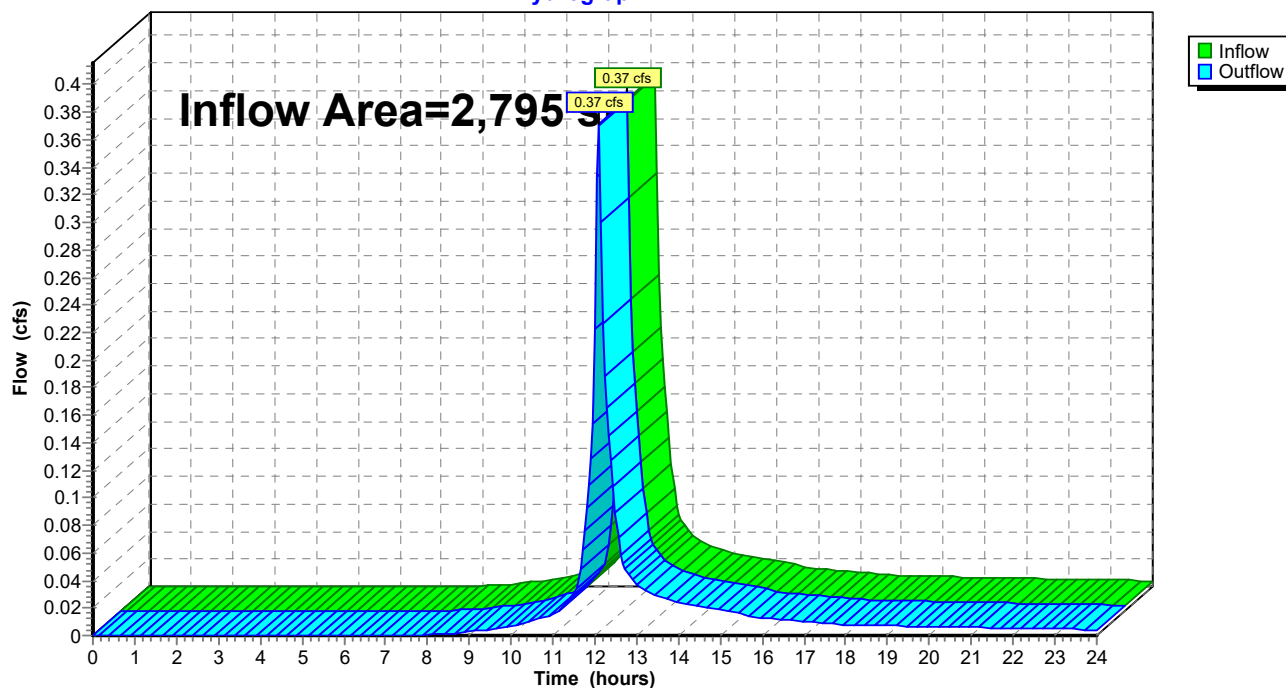
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2,795 sf, 51.31% Impervious, Inflow Depth > 5.03" for 100-Yr 24 Hr event
Inflow = 0.37 cfs @ 12.09 hrs, Volume= 1,172 cf
Outflow = 0.37 cfs @ 12.09 hrs, Volume= 1,172 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-1: Design Point 1

Hydrograph

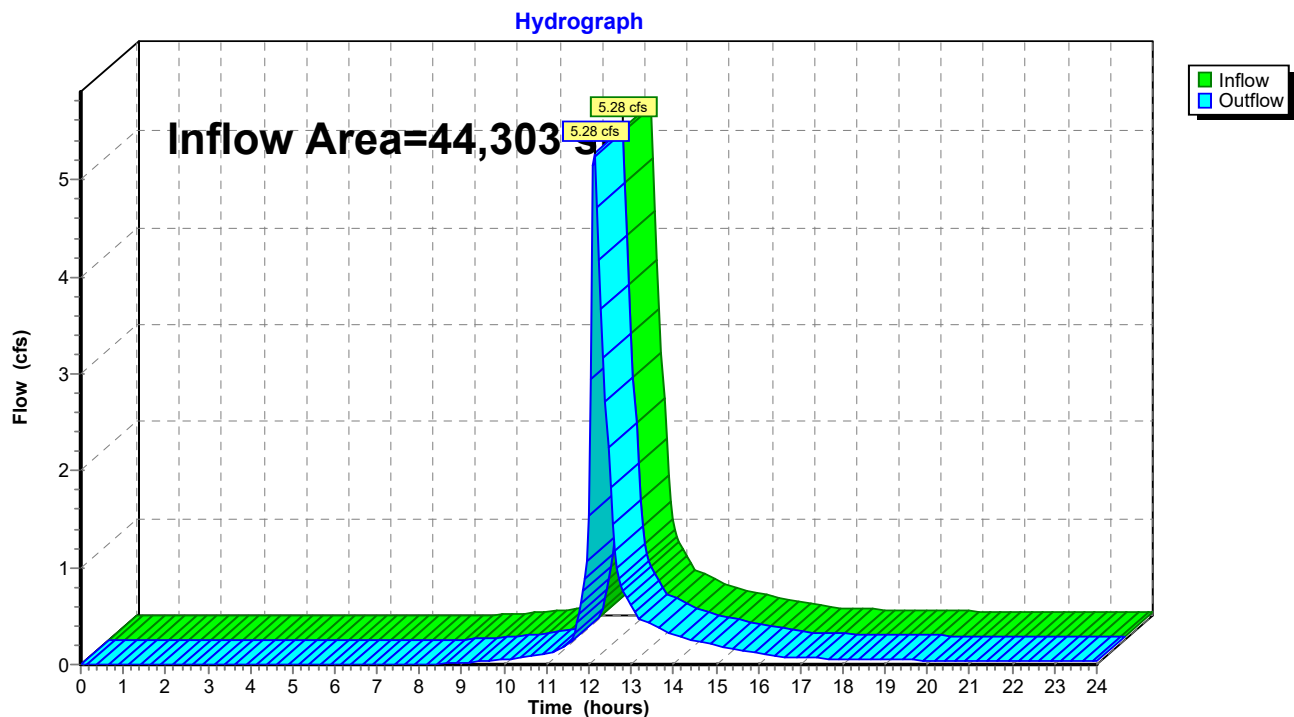


Summary for Reach DP-2: Design Point 2

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 44,303 sf, 58.91% Impervious, Inflow Depth > 3.85" for 100-Yr 24 Hr event
Inflow = 5.28 cfs @ 12.13 hrs, Volume= 14,222 cf
Outflow = 5.28 cfs @ 12.13 hrs, Volume= 14,222 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach DP-2: Design Point 2

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Post-Construction

Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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Summary for Pond PSIS: PSIS

Inflow Area = 25,071 sf, 100.00% Impervious, Inflow Depth > 8.55" for 100-Yr 24 Hr event
 Inflow = 4.86 cfs @ 12.09 hrs, Volume= 17,873 cf
 Outflow = 3.38 cfs @ 12.17 hrs, Volume= 15,644 cf, Atten= 30%, Lag= 5.3 min
 Discarded = 0.14 cfs @ 8.35 hrs, Volume= 9,488 cf
 Primary = 3.24 cfs @ 12.17 hrs, Volume= 6,156 cf
 Routed to Reach DP-2 : Design Point 2

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 88.88' @ 12.17 hrs Surf.Area= 2,458 sf Storage= 5,157 cf

Plug-Flow detention time= 136.1 min calculated for 15,612 cf (87% of inflow)
 Center-of-Mass det. time= 78.5 min (818.2 - 739.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	85.50'	2,221 cf	30.00'W x 81.94'L x 3.50'H Field A 8,603 cf Overall - 3,052 cf Embedded = 5,552 cf x 40.0% Voids
#2A	86.00'	3,052 cf	ADS_StormTech RC-750 +Cap x 66 Inside #1 Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 66 Chambers in 6 Rows
		5,272 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	85.50'	2.410 in/hr Exfiltration over Surface area
#2	Primary	87.90'	6.0" Vert. Orifice/Grate X 4.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.14 cfs @ 8.35 hrs HW=85.54' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=3.17 cfs @ 12.17 hrs HW=88.85' (Free Discharge)
 ↑ **2=Orifice/Grate** (Orifice Controls 3.17 cfs @ 4.04 fps)

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Post-Construction
Type III 24-hr 100-Yr 24 Hr Rainfall=8.80"

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Pond PSIS: PSIS - Chamber Wizard Field A

Chamber Model = ADS_StormTechRC-750 +Cap (ADS StormTech®RC-750 with cap length)

Effective Size= 45.4"W x 30.0"H => 6.49 sf x 7.12'L = 46.2 cf

Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap

51.0" Wide + 6.0" Spacing = 57.0" C-C Row Spacing

11 Chambers/Row x 7.12' Long +0.81' Cap Length x 2 = 79.94' Row Length +12.0" End Stone x 2 = 81.94' Base Length

6 Rows x 51.0" Wide + 6.0" Spacing x 5 + 12.0" Side Stone x 2 = 30.00' Base Width

6.0" Stone Base + 30.0" Chamber Height + 6.0" Stone Cover = 3.50' Field Height

66 Chambers x 46.2 cf = 3,051.8 cf Chamber Storage

8,603.4 cf Field - 3,051.8 cf Chambers = 5,551.6 cf Stone x 40.0% Voids = 2,220.6 cf Stone Storage

Chamber Storage + Stone Storage = 5,272.4 cf = 0.121 af

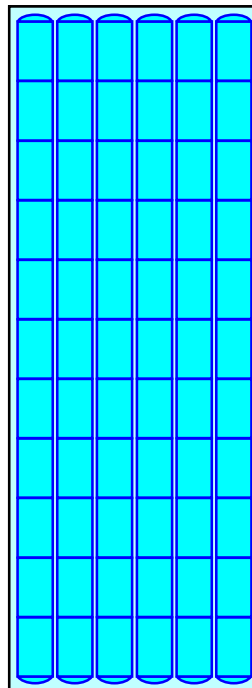
Overall Storage Efficiency = 61.3%

Overall System Size = 81.94' x 30.00' x 3.50'

66 Chambers

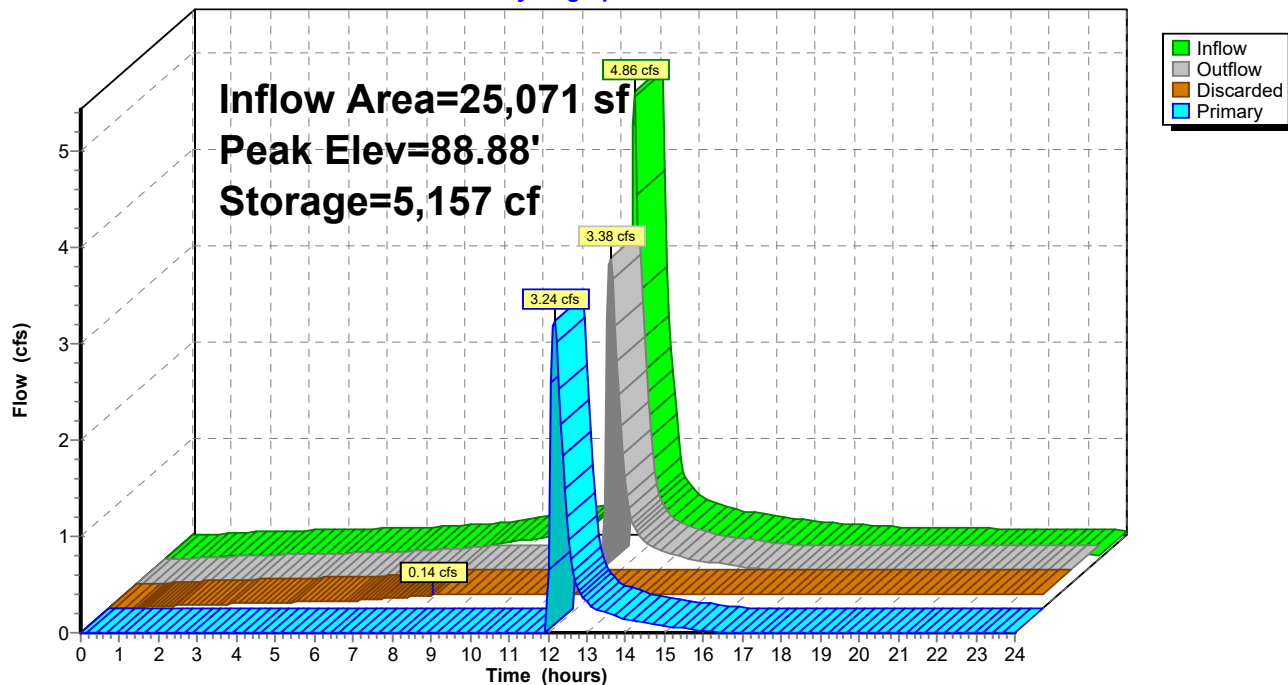
318.6 cy Field

205.6 cy Stone



Pond PSIS: PSIS

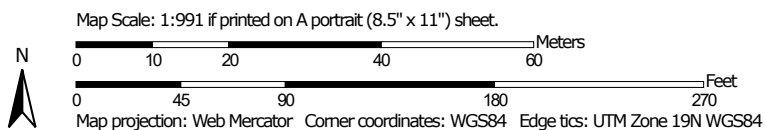
Hydrograph



Soil Map—Middlesex County, Massachusetts
(1021-1025 Massachusetts Ave, Arlington Ma)



Soil Map may not be valid at this scale.




Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts

Survey Area Data: Version 21, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 13, 2020—Sep 15, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
602	Urban land	3.4	72.4%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	0.3	6.8%
655	Udorthents, wet substratum	1.0	20.8%
Totals for Area of Interest		4.7	100.0%

INSTRUCTIONS:

1. Sheet is nonautomated. Print sheet and complete using hand calculations. Column A and B: See MassDEP Structural BMP Table
2. The calculations must be completed using the Column Headings specified in Chart and Not the Excel Column Headings
3. To complete Chart Column D, multiple Column B value within Row x Column C value within Row
4. To complete Chart Column E value, subtract Column D value within Row from Column C within Row
5. Total TSS Removal = Sum All Values in Column D

Location: 1021 & 1025 Massachusetts Avenue, Arlington MA

Train 1+2: PSIS

**TSS Removal
Calculation**

A BMP	B TSS Removal Rate	C Starting TSS Load*	D Amount Removed (B*C)	E Remaining Load (C-D)
Proposed Subsurface Infiltration System (PSIS)	80%	1.00	0.80	0.20

Total TSS Removal =

80.0%

Project: 21583

Prepared By: Patriot Engineering

Date: 12/9/2021

*Equals remaining load from previous BMP(E)
which enters the BMP

** See portion of STEP Fact Sheet for removal rate

CAPTURE AREA ADJUSTMENT

Due to a limitation of grading adjustments that can be made for this project the amount of runoff that can be directed to the infiltration facility. Therefore the storage capacity of the infiltration facilities has been increased to allow for so it may capture more of the runoff from the impervious surface within the drainage area.

The following calculation in accordance with MA Stormwater Handbook demonstrates at the storage capacity of the infiltration BMP's is sufficient to meet Standard #3.

Steps:

1. Required recharge volume for total site impervious area.

From Standard #3 recharge calculations page, summation of required recharge volume = 1,324 CF

2. Site impervious area draining to recharge facilities (from previous). Roof runoff captured completely within infiltration systems on each lot.

Area = 25,071 SF

3. Divide total site impervious area by impervious area draining to recharge facilities. Roof runoff captured completely within infiltration systems on each lot.

Total Site Impervious = 26,489 SF

$26,489 \text{ SF} / 25,071 \text{ SF} = 1.06$

4. Multiply result of #3 by original recharge volume in #1.

$1.06 \times 1,324 = 1,398 \text{ CF}$

5. Ensure minimum 65% impervious area draining to recharge facilities.

$25,071 \text{ SF} / 26,489 \text{ SF} = 0.95 = 95\%$

6. Recharge facilities provide total recharge volume of 4,024 CF (below to outlet).
Recharge volume 4,024 CF > 1,324 CF adjusted total recharge volume.

All Recharge Volumes have been achieved as required by the Massachusetts Stormwater Management Standards

72-HOUR DRAW DOWN CALCULATIONS

$$\text{Time} = \frac{R_v}{(K)(\text{BottomArea})(n)}$$

R_v = Storage Volume

K = Saturated Hydraulic Conductivity for Sandy Loam = 1.02 in/hour

Bottom Area = Bottom Area of Recharge Structure

n = Porosity (1)

PSIS-1

R_v = 5,272 cf

Bottom Area = 2,458 sf

Time = 5,272cf / (2.41 in/hr)(1'/12")(2,458 sf)(1)

Time = 10.7 hours

10.7 hours < 72 hours

**OPERATION AND MAINTENANCE &
EROSION AND SEDIMENTATION CONTROL PROGRAM
for
A PROPOSED STORMWATER MANAGEMENT SYSTEM
located at
1021 & 1025 MASSACHUSETTS AVENUE
ARLINGTON, MASSACHUSETTS**

Applicant:

MAJ Investment, LLC
13 Wheeling Avenue
Woburn, Massachusetts 01801

Prepared by:

Patriot Engineering
35 Bedford Street, Suite 4
Lexington, Massachusetts 02420
(978) 726-2654

December 9, 2021

Project Name: 1021 & 1025 Massachusetts Ave, Arlington Ma

Owner Name: The Maggiore Companies

Party Responsible for Maintenance

During Construction: Contractor

Party Responsible for Maintenance

After Construction: Homeowner's Association

Erosion and Sedimentation Control Measures during Construction Activities

Filtermitt (or approved equal)

Filtermitt (or approved equal) will be installed along the down gradient limit of work as depicted on the Site Plan. The filtermitt shall be installed prior to the commencement of any work on-site and in accordance with the design plans. An additional supply of filtermitt shall be on-site to replace and/or repair any filtermitt that have been disturbed or are in poor condition. The line of filtermitt shall be inspected and maintained on a weekly basis and after every major storm event (2-year) during construction. No construction activities are to occur beyond the filtermitt at any time. Deposited sediments shall be removed when the volume of the deposition reaches approximately one-half the height of the filtermitt.

Stockpiles

All unused debris, soil, and other material shall be stockpiled in locations of relatively flat grades, away from any trees identified to be saved and upgradient of the filtermitt. Stockpile side slopes shall not be greater than 2:1. All stockpiles shall be surrounded by a row of filtermitt. Surrounding filtermitt shall be inspected and maintained on a daily basis.

Surface Stabilization

The surface of all disturbed areas shall be stabilized during and after construction. Disturbed areas remaining idle for more than 14 days shall be stabilized. Temporary measures shall be taken during construction to prevent erosion and siltation. No construction sediment shall be allowed to enter any infiltration system or formal drainage system. All disturbed slopes will be stabilized with a permanent vegetative cover. Some or all of the following measures will be utilized on this project as conditions may warrant.

- a. Temporary Seeding
- b. Temporary Mulching
- c. Permanent Seeding
- d. Placement of Sod
- e. Hydroseeding
- f. Placement of Hay
- g. Placement of Jute Netting

Dust shall be controlled at the site.

Tree Protection

Existing trees to be saved shall be protected with orange construction fence (offset from the tree trunk by professional standard based on canopy).

Construction Tracking Pad

A construction tracking pad shall be installed at the designated entrances/exits, as shown on the Site plans, to the site to reduce the amount of sediment transported off site. The construction tracking pad shall be inspected weekly.

Silt Sacks

Silt Sacks shall be installed within the basins. The performance of the basins shall be checked after every major storm event during construction, in the event of clogging within the Silt Sack, it shall be removed and replaced with a clean Silt Sack. Stormwater quality unit shall be checked bi-weekly.

Subsurface Infiltration Facility

Construction activity above and around the proposed location of the subsurface infiltration facility shall be limited to prevent compaction of the existing soil. Care shall be taken to redirect stormwater runoff from this area to prevent ponding. Installation of this system shall occur under dry weather conditions and system shall be backfilled immediately to prohibit the introduction of fines or other material that would compromise the functionality of this system.

Removal of Sediment and Erosion Controls

At the completion of construction activities and after receiving approval from the Town of Arlington, all physical sediment and erosion controls shall be removed from the site per Town of Arlington. The areas where the controls have been removed shall be seeded and stabilized immediately upon removal.

Long-Term Inspection and Maintenance Measures after Construction

Erosion Control

Eroded sediments can adversely affect the performance of the stormwater management system. Eroding or barren areas should be immediately re-vegetated.

Subsurface Infiltration Facility

The infiltration system inspections should include inspections following the first several rainfall events or first few months after construction, after all major storms (3.2" inches of rain over a 24-hour period or greater), and on regular bi-annual scheduled dates, to ascertain whether captured runoff drains within 72 hours following the event. Ponded water inside the system (as visible from the observation well) after several dry days often indicates that the bottom of the system is clogged. If the water does not drain, then a qualified professional should be retained to determine the cause of apparent infiltration failure and

recommend corrective action. Such corrective action should be immediately implemented by the homeowner. If depth of sediment is observed to be greater than 3" then the system should be cleaned. The homeowner shall contact a sewer and drain cleaning company to flood the system via pump truck so the water is forced back to the upstream cleanout where sediment can be vacuumed out.

Debris and Litter Removal

Trash may collect in the BMP's, potentially causing clogging of the facilities. All debris and litter shall be removed when necessary, and after each storm event. Sediment and debris collected from vacuuming and/or sweeping should be disposed of at a permitted waste disposal facility. Avoid disposing of this material on site, where it could be washed into the proposed subsurface infiltration systems.

Lawn Mowing

All lawn mowing to take place will be done with a mulch mower so grass clippings will not be an issue.

Good Housekeeping Practices (in accordance with Standard 10 of the Stormwater Management Handbook to prevent illicit discharges)

Provisions for storing paints, cleaners, automotive waste and other potentially hazardous household waste products inside or under cover

- All materials on site will be stored inside in a neat, orderly, manner in their appropriate containers with the original manufacturer's label.
- Only store enough material necessary. Whenever possible, all of a product shall be used up before disposing of container.
- Manufacturer, local, and State recommendations for proper use and disposal shall be followed.

Vehicle washing controls

- A commercial car wash shall be used when possible. Car washes treat and/or recycle water.
- Cars shall be washed on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Use biodegradable soaps.
- A water hose with a nozzle that automatically turns off when left unattended.

Requirements for routine inspection and maintenance of stormwater BMPs

- See Inspection and Maintenance Measures after Construction.

Spill prevention and response plans

- Spill Control Practices shall be in conformance with the guidelines set forth in the National Pollutant Discharge Elimination System (NPDES) Stormwater Pollution Prevention Plan (SWPPP)

Provisions for maintenance of lawns, gardens, and other landscaped areas

- Grass shall not be cut shorter than 2 to 3 inches and mulch clipping should be left on lawn as a natural fertilizer.

- Use low volume water approaches such as drip-type or sprinkler systems. Water plants only when needed to enhance root growth and avoid runoff problems.
- The use of mulch shall be utilized where possible. Mulch helps retain water and prevents erosion.

Requirements for storage and use of fertilizers, herbicides and pesticides

- Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.
- Do not fertilize before a rainstorm.
- Consider using organic fertilizers. They release nutrients more slowly.
- Pesticides shall be applied on lawns and gardens only when necessary and applied only in the minimum amounts recommended by the manufacturer.

Pet waste management

- Scoop up and seal pet wastes in a plastic bag. Dispose of properly, in the garbage.

Provisions for solid waste management

- All solid waste shall be disposed of or recycled in accordance with local town regulations.

Snow disposal and plowing plans relative to Resource Area

- Snow shall be plowed and stored on gravel, grass, or other permeable surfaces to allow filtration to occur.
- Once snow melts all sand salt and debris shall be extracted from surface and properly disposed of.
- Snow shall not be disposed of in any resource area or waterbody.
- Avoid disposing snow on top of storm drain catchbasins or stormwater drainage swale.

Winter Road Salt and/or Sand use and storage restrictions

- Sand storage piles should be located outside the 100-year buffer zone and shall be covered at all times. No salt to be stored or used on site.
- Alternative materials, such as sand or gravel, should be used in especially sensitive areas.

Roadway and Parking Lot sweeping schedule

- Pavement sweeping shall be conducted at a frequency of not less than once per year.
- Removal of any accumulated sand, grit, and debris from driveway after the snow melts shall be completed shortly after snow melts for the season.

Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL

Not Applicable

Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan

To be determined by the owner.

List of Emergency contacts for implementing Long-Term Pollution Prevention Plan

To be determined by the owner.

Applicant's Certification

I certify under penalty of law that I have read, understand and agree to abide by the practices outlined in this document.

Signed:_____ Date:_____

The Maggiore Companies

Contractor's Certification

I certify under penalty of law that I have read, understand and agree to abide by the practices outlined in this document.

Signed:_____ Date:_____

Contractor

STORMWATER MANAGEMENT
CONSTRUCTION PHASE

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 1021 & 1025 Massachusetts Ave, Arlington MA

WEATHER: _____

<i>Inspection Date</i>	<i>Inspector</i>	<i>Area Inspected</i>	<i>Required Inspection Frequency if BMP</i>	<i>Comments</i>	<i>Recommendation</i>	<i>Follow-up Inspection Required (yes/no)</i>
		<i>Filtermitt</i>	<i>Weekly and After Major Storm Events</i>			
		<i>Construction Tracking Pad</i>	<i>Weekly and After Major Storm Events</i>			
		<i>Subsurface Infiltration System</i>	<i>Weekly and After Major Storm Events</i>			

-
- (1) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.
 - (2) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)

Stormwater Control Manager: _____

STORMWATER MANAGEMENT
AFTER CONSTRUCTION

INSPECTION SCHEDULE AND EVALUATION CHECKLIST

PROJECT LOCATION: 1021 & 1025 Massachusetts Ave, Arlington MA

WEATHER: _____

<i>Inspection Date</i>	<i>Inspector</i>	<i>Area Inspected</i>	<i>Required Inspection Frequency if BMP</i>	<i>Comments</i>	<i>Recommendation</i>	<i>Follow-up Inspection Required (yes/no)</i>
		<i>Subsurface Infiltration System</i>	<i>Bi-annually and After Major Storm Events</i>			

(3) Refer to the Massachusetts Stormwater Handbook, Volume Two: Stormwater Technical Handbook (February 2008) for recommendations regarding frequency for inspection and maintenance of specific BMP's.

(4) Inspections to be conducted by a qualified professional such as an environmental scientist or civil engineer.

Limited or no use of sodium chloride salts, fertilizers or pesticides recommended.

Other notes: (Include deviations from: Con. Comm. Order of Conditions, PB Approval, Construction Sequence and Approved Plan)

Stormwater Control Manager: _____